Self Diagnosis Supported model

SERVICE MANUAL

CPD-E210

CPD-E210

US Model

Canadian Model

Chassis No. SCC-L31A-A

D99C CHASSIS

SPECIFICATIONS

Picture tube	0.24 mm aperture grill pitch 17 inches measured diagonally 90-degree deflection
Video image area	(16" maximum viewing image) Approx. 327 X 243 mm (w/h) ($12^{9/10}$ x $9^{1/2}$ inches)
Resolution	Horizontal: Max. 1600 dots Vertical: Max. 1200 lines
Standard image area	Approx. 312 x 234 mm (w/h) ($12^{1/4}$ x $9^{1/4}$ inches)
Input signal	
Video	Analog RGB (75 ohms typical) 0.7 Vp-p, ±5%, Positive
Sync	Separate HD/VD, TTL Polarity Free External Composite, TTL Polarity Free (2K ohms impedance)

Deflection frequency	Horizontal: 30 to 85 KHz Vertical: 48 to 120 Hz
AC input voltage / current	100 to 120 V, 50/60 Hz, 1.7A 220 to 240V, 50/60Hz, 0.9A
Dimensions	404 x 413.5 x 419.5mm (w/h/d) ($15^{9/10}$ x $16^{3/10}$ x $16^{1/2}$ inches)
Mass	Approx. 20.0 kg (44 lb 2 oz.)
Plug and Play	DDC/DDC2B, DDC2Bi, GTF

Design and specifications are subject to change without notice.

TRINITRON® COLOR MONITOR

SONY®

POWER MANAGEMENT

The power saving mode complies with the VESA Display Power Management Signaling standard. Each state of power management shall be activated by the host computer terminating the appropriate sync signals. Blanking the video must precede termination of the sync signals. The elapsed time counter shall also be controlled by the host computer. Reactivation of the monitor shall be accomplished from the host computer by re-establishing the normal sync signal.

	Power consumption mode	Screen (video)	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	yes	yes	≤ 120 W	--	Green
2	Standby (1st mode)	blank	no	yes	≤ 15 W	Approx. 5 sec.	Green and Orange Alternate
3	Suspend (2nd mode)	blank	yes	no	≤ 15 W	Approx. 5 sec.	Green and Orange Alternate
4	Active-off (3rd mode)	blank	no	no	≤ 3 W	Approx. 10 sec.	Orange
5	Power-off	--	--	--	0 W	--	Off

SELF DIAGNOSIS FUNCTION

When a failure occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

	Status	Area of Failure	LED Indication
1	Failure 1	HV or +B	Amber (0.5 second)/Off (0.5 second)
2	Failure 2	H Stop or V Stop	Amber (1.5 second)/Off (0.5 second)
3	Failure 3	ABL	Amber (0.5 second)/Off (1.5 second)
4	Aging/Self Test		Amber (0.5 second)/Off (0.5 second)/ Green (0.5 second)/Off (0.5 second)

TIMING SPECIFICATION

TIMING SPECIFICATION								
MODE	1	2	3	4	Primary Mode 5	6	7	8
Resolution (H x V)	640 X 480	800 X 600	832 x624	1024 X 768	1024 X 768	720 X 400	640 X 480	1280 X 1024
Dot Clock (MHz)	25.175	56.250	57.283	78.750	94.500	28.322	36.000	135.000
HORIZONTAL								
Hor. Freq. (kHz)	31.469	53.674	49.725	60.023	68.677	31.469	43.269	79.976
H-Total	31.778	18.631	20.111	16.660	14.561	31.777	23.111	12.504
H-Blanking	6.356	4.409	5.586	3.657	3.725	6.355	5.333	3.022
H-Front Porch	0.636	0.569	0.559	0.203	0.508	0.636	1.556	0.119
H-Sync.	3.813	1.138	1.117	1.219	1.016	3.813	1.556	1.067
H-Back Porch	1.907	2.702	3.910	2.235	2.201	1.907	2.222	1.837
H-Active (µsec)	25.422	14.222	14.524	13.003	10.836	25.422	17.778	9.481
VERTICAL								
Ver. Freq. (Hz)	59.940	85.061	74.550	75.029	84.997	70.087	85.008	75.025
V-Total	525	631	667	800	808	449	509	1066
V-Blanking	45	31	43	32	40	49	29	42
V-Front Porch	10	1	1	1	1	12	1	1
V-Sync.	2	3	3	3	3	2	3	3
V-Back Porch	33	27	39	28	36	35	25	38
V-Active (lines)	480	600	624	768	768	400	480	1024
SYNC.								
Int (G)	NO	NO	NO	NO	NO	NO	NO	NO
Ext (H/V)/Polarity	YES -/-	NO +/+	YES -/-	YES +/+	YES +/+	YES -/+	YES -/-	YES +/+
Ext (CS)/Polarity	NO	NO	NO	NO	NO	NO	NO	NO
Int/Non Int	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

TABLE OF CONTENTS

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, “metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

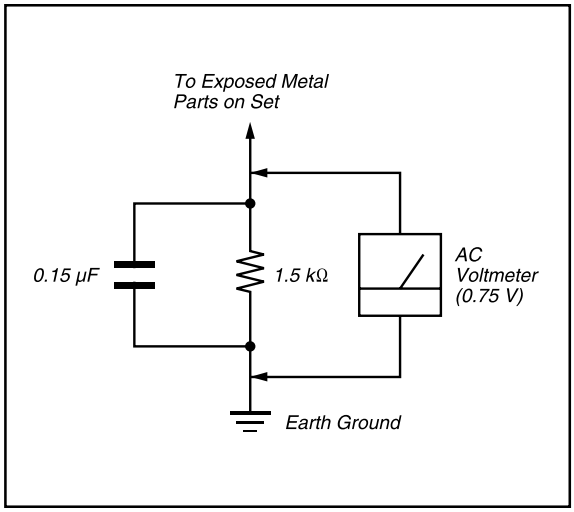


Figure A

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampere). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63Trd are examples of passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Figure A)

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVEE.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

The following are partial abstracts from the Operating Instruction Manual. The page numbers shown reflect those of the Operating Instruction Manual.

Precautions

Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.
  For the customers in the U.S.A.
  If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.

  Example of plug types

  for 100 to 120 V AC for 200 to 240 V AC

- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the screen's surface to discharge.
- After the power is turned on, the screen is demagnetized (degaussed) for about 5 seconds. This generates a strong magnetic field around the screen which may affect data stored on magnetic tapes and disks placed near the monitor. Be sure to keep magnetic recording equipment, tapes, and disks away from the monitor.

The equipment should be installed near an easily accessible outlet.

Installation

Do not install the monitor in the following places:
- on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight
- in a place subject to severe temperature changes
- in a place subject to mechanical vibration or shock
- on an unstable surface
- near equipment which generates magnetism, such as a transformer or high voltage power lines
- near or on an electrically charged metal surface

Maintenance

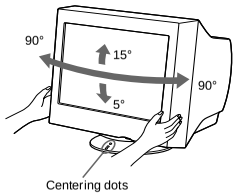
- Clean the screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzene.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the tilt-swivel

This monitor can be adjusted within the angles shown below. To find the center of the monitor's turning radius, align the center of the monitor's screen with the centering dots on the stand.
Hold the monitor at the bottom with both hands when you turn it horizontally or vertically. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up vertically.

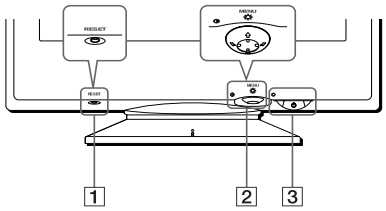


SECTION 1
GENERAL

Identifying parts and controls

See the pages in parentheses for further details.

Front

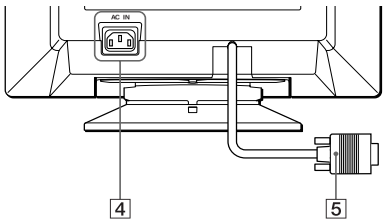


1 RESET button (page 12)
This button resets the adjustments to the factory settings.

2 Control button (page 9)
The control button is used to display the menu and make adjustments to the monitor, including brightness and contrast adjustments.

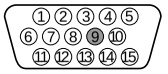
3 ⏻ (power) switch and indicator (pages 7, 13, 16)
This button turns the monitor on and off. The power indicator lights up in green when the monitor is turned on, and either flashes in green and orange, or lights up in orange when the monitor is in power saving mode.

Rear



4 AC IN connector (page 6)
This connector provides AC power to the monitor.

5 Video input connector (HD15) (page 6)
This connector inputs RGB video signals (0.700 Vp-p, positive) and sync signals.



Pin No.	Signal
1	Red
2	Green (Sync on Green)
3	Blue
4	ID (Ground)
5	DDC Ground*
6	Red Ground
7	Green Ground
8	Blue Ground
9	–
10	Ground
11	ID (Ground)
12	Bi-Directional Data (SDA)*
13	H. Sync
14	V. Sync
15	Data Clock (SCL)*

* DDC (Display Data Channel) is a standard of VESA.

US

Setup

Before using your monitor, check that the following accessories are included in your carton:

- Power cord (1)
- Windows Monitor Information Disk (1)
- Warranty card (1)
- Notes on cleaning the screen's surface (1)
- This instruction manual (1)
- Information sheet for Macintosh users (1)

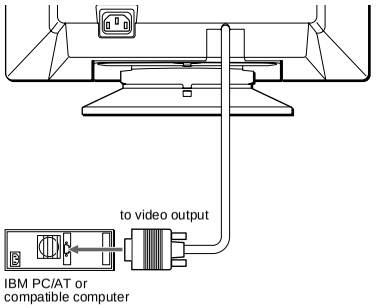
Step 1: Connect your monitor to your computer

Turn off the monitor and computer before connecting.

Note

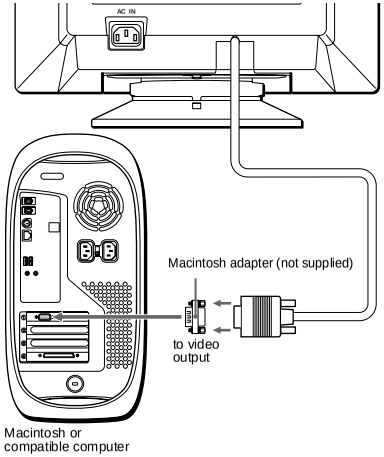
Do not touch the pins of the video cable connector as this might bend the pins.

■ Connecting to an IBM PC/AT or compatible computer



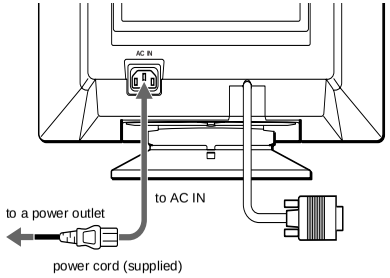
■ Connecting to a Macintosh or compatible computer

You will need a Macintosh adapter (not supplied).



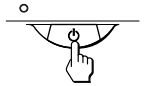
Step 2: Connect the power cord

With the monitor and computer switched off, first connect the power cord to the monitor, then connect it to a power outlet.



Step 3: Turn on the monitor and computer

First turn on the monitor, then turn on the computer.



The installation of your monitor is complete.
If necessary, use the monitor's controls to adjust the picture.

If no picture appears on your screen

- Check that the monitor is correctly connected to the computer.
- If NO INPUT SIGNAL appears on the screen, confirm that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- If MONITOR IS IN POWER SAVE MODE appeared on the screen, try pressing any key on the computer keyboard.
- If you are replacing an old monitor with this model and OUT OF SCAN RANGE appears on the screen, reconnect the old monitor. Then adjust the computer's graphic board so that the horizontal frequency is between 30 – 85 kHz, and the vertical frequency is between 48 – 120 Hz.

For more information about the on-screen messages, see "Trouble symptoms and remedies" on page 14.

For customers using Windows 95/98

To maximize the potential of your monitor, install the new model information file from the supplied Windows Monitor Information Disk onto your PC.
This monitor complies with the "VESA DDC" Plug & Play standard. If your PC/graphics board complies with DDC, select "Plug & Play Monitor (VESA DDC)" or this monitor's model name as the monitor type in the "Control Panel" of Windows 95/98. If your PC/graphics board has difficulty communicating with this monitor, load the Windows Monitor Information Disk and select this monitor's model name as the monitor type.

For customers using Windows NT4.0

Monitor setup in Windows NT4.0 is different from Windows 95/98 and does not involve the selection of monitor type. Refer to the Windows NT4.0 instruction manual for further details on adjusting the resolution, refresh rate, and number of colors.

Adjusting the monitor's resolution and color number

Adjust the monitor's resolution and color number by referring to your computer's instruction manual. The color number may vary according to your computer or video board. The color palette setting and the actual number of colors are as follows:

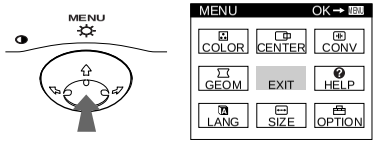
- High Color (16 bit) ⟶ 65,536 colors
- True Color (24 bit) ⟶ about 16.77 million colors

In true color mode (24 bit), speed may be slower.

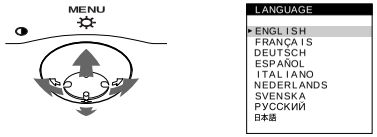
Selecting the on-screen menu language (LANG)

English, French, German, Spanish, Italian, Dutch, Swedish, Russian and Japanese versions of the on-screen menus are available. The default setting is English.

1 Press the center of the control button.
See page 9 for more information on using the control button.



2 Move the control button to highlight LANG and press the center of the control button again.



3 Move the control button ↓/↑ to select a language.

- ENGLISH
- FRANÇAIS: French
- DEUTSCH: German
- ESPAÑOL: Spanish
- ITALIANO: Italian
- NEDERLANDS: Dutch
- SVENSKA: Swedish
- РУССКИЙ: Russian
- 日本語: Japanese

To close the menu

Press the center of the control button once to return to the main MENU, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.

To reset to English

Press the RESET button while the LANGUAGE menu is displayed on the screen.

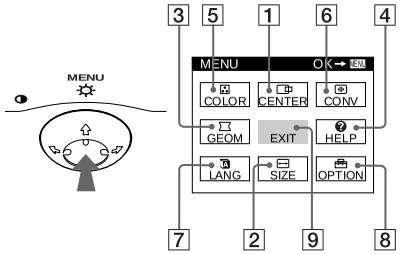
US

Customizing Your Monitor

You can make numerous adjustments to your monitor using the on-screen menu.

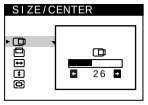
Navigating the menu

Press the center of the control button to display the main MENU on your screen. See page 9 for more information on using the control button.

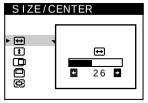


Use the control button to select one of the following menus.

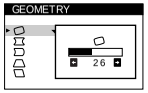
1 CENTER (page 9)
Selects the CENTER menu to adjust the picture's centering, size or zoom.



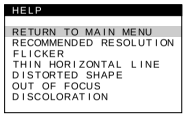
2 SIZE (page 9)
Selects the SIZE menu to adjust the picture's size, centering or zoom.



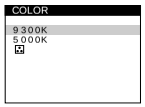
3 GEOM (page 10)
Select the GEOM menu to adjust the picture's rotation and shape.



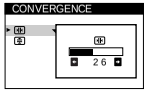
4 HELP (page 12)
Select the HELP menu to display helpful hints and information about this monitor.



5 COLOR (page 10)
Select the COLOR menu to adjust the picture's color temperature. You can use this to match the monitor's colors to a printed picture's colors.

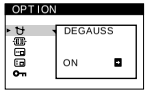


6 CONV (page 10)
Select the CONV menu to adjust the picture's horizontal and vertical convergence.



7 LANG (page 7)
Select LANG to choose the on-screen menu's language.

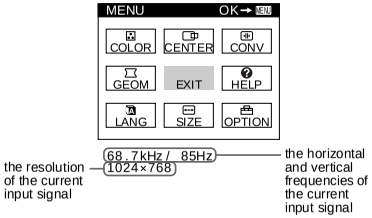
8 OPTION (page 11)
Select OPTION to adjust the monitor's options. The options include:
- degaussing the screen
- adjusting the moire cancellation level
- changing the on-screen menu position
- locking the controls



9 EXIT
Select EXIT to close the menu.

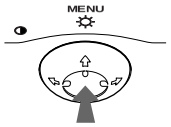
■ Displaying the current input signal

The horizontal and vertical frequencies of the current input signal are displayed in the main MENU. If the signal matches one of this monitor's factory preset modes, the resolution is also displayed.

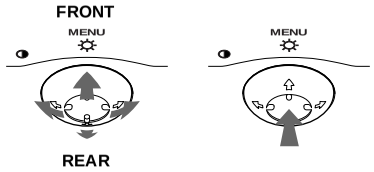


■ Using the control button

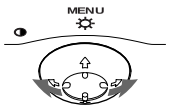
1 Display the main MENU.
Press the center of the control button to display the main MENU on your screen.



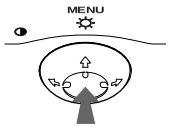
2 Select the menu you want to adjust.
Highlight the desired menu by moving the control button towards the rear to go up (↑), towards the front to go down (↓), and left (←) or right (→) to move sideways.



3 Adjust the menu.
Move the control button left (←) or right (→) to make the adjustment.

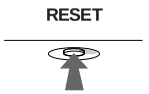


4 Close the menu.
Press the center of the control button once to return to the main MENU, and twice to return to normal viewing. If no buttons are pressed, the menu closes automatically after about 30 seconds.



■ Resetting the adjustments

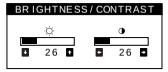
Press the RESET button. See page 12 for more information on resetting the adjustments.



Adjusting the brightness and contrast

Brightness and contrast adjustments are made using a separate BRIGHTNESS/CONTRAST menu.
These settings are stored in memory for all input signals.

1 Move the control button in any direction.
The BRIGHTNESS/CONTRAST menu appears on the screen.



2 Move the control button ↓/↑ to adjust the brightness (☼), and ←/→ to adjust the contrast (◑).
The menu automatically disappears after about 3 seconds.

Adjusting the centering of the picture (CENTER)

This setting is stored in memory for the current input signal.

US

1 Press the center of the control button.
The main MENU appears on the screen.

2 Move the control button to highlight CENTER and press the center of the control button again.
The SIZE/CENTER menu appears on the screen.

3 First move the control button ↓/↑ to select for horizontal adjustment, or for vertical adjustment. Then move the control button ←/→ to adjust the centering.

Adjusting the size of the picture (SIZE)

This setting is stored in memory for the current input signal.

1 Press the center of the control button.
The main MENU appears on the screen.

2 Move the control button to highlight SIZE and press the center of the control button again.
The SIZE/CENTER menu appears on the screen.

3 First move the control button ↓/↑ to select for horizontal adjustment, or for vertical adjustment. Then move the control button ←/→ to adjust the size.

Enlarging or reducing the picture (ZOOM)

This setting is stored in memory for the current input signal.

1 **Press the center of the control button.**
The main MENU appears on the screen.

2 **Move the control button to highlight SIZE or CENTER and press the center of the control button again.**
The SIZE/CENTER menu appears on the screen.

3 **Move the control button ↓/↑ to select (zoom), and move ←/→ to enlarge or reduce the picture.**

Notes

- Adjustment stops when either the horizontal or vertical size reaches its maximum or minimum value.
- The horizontal adjustment value is not displayed in the menu.

Adjusting the shape of the picture (GEOM)

The GEOM settings allow you to adjust the rotation and shape of the picture.
The (rotation) setting is stored in memory for all input signals. All other settings are stored in memory for the current input signal.

1 **Press the center of the control button.**
The main MENU appears on the screen.

2 **Move the control button to highlight GEOM and press the center of the control button again.**
The GEOMETRY menu appears on the screen.

3 **First move the control button ↓/↑ to select the desired adjustment item. Then move the control button ←/→ to make the adjustment.**

Select	To
	rotate the picture
	expand or contract the picture sides
	shift the picture sides to the left or right
	adjust the picture width at the top of the screen
	shift the picture to the left or right at the top of the screen

Adjusting the color of the picture (COLOR)

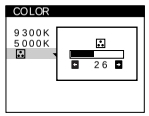
The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high. This adjustment is useful for matching the monitor's colors to a printed picture's colors.
This setting is stored in memory for all input signals.

1 **Press the center of the control button.**
The main MENU appears on the screen.

2 **Move the control button to highlight COLOR and press the center of the control button again.**
The COLOR menu appears on the screen.

3 **Move the control button ↓/↑ to select a color temperature.**
The preset color temperatures are 5000K and 9300K. Since the default setting is 9300K, the whites will change from a bluish hue to a reddish hue as the temperature is lowered to 5000K.

4 **If necessary, fine tune the color temperature.**
You can select your own color temperature between 9300K and 5000K.
First move the control button ↓/↑ to select . Then move the control button ←/→ to adjust the color temperature.



Adjusting the convergence (CONV)

The CONV settings allow you to adjust the quality of the picture by controlling the convergence. The convergence refers to the alignment of the red, green, and blue color signals.
If you see red or blue shadows around letters or lines, adjust the convergence.
These settings are stored in memory for all input signals.

1 **Press the center of the control button.**
The main MENU appears on the screen.

2 **Move the control button to highlight CONV and press the center of the control button again.**
The CONVERGENCE menu appears on the screen.

3 **First move the control button ↓/↑ to select for horizontal adjustment, or for vertical adjustment. Then move the control button ←/→ to adjust the convergence.**

Additional settings (OPTION)

You can manually degauss (demagnetize) the monitor, adjust the moire cancellation level, change the menu position, and lock the controls.

1 **Press the center of the control button.**
The main MENU appears on the screen.

2 **Move the control button to highlight OPTION and press the center of the control button again.**
The OPTION menu appears on the screen.

3 **Move the control button ↓/↑ to select the desired adjustment item.**
Adjust the selected item according to the following instructions.

Degaussing the screen

The monitor is automatically demagnetized (degaussed) when the power is turned on.
To manually degauss the monitor, first move the control button ↓/↑ to select (DEGAUSS). Then move the control button →.
The screen is degaussed for about 5 seconds. If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result.

Adjusting the moire*

If elliptical or wavy patterns appear on the screen, adjust the moire cancellation level.
To adjust the amount of moire cancellation, first move the control button ↓/↑ to select (MOIRE ADJUST). Then move the control button ←/→ until the moire effect is at a minimum.

* Moire is a type of natural interference which produces soft, wavy lines on your screen. It may appear due to interference between the pattern of the picture on the screen and the phosphor pitch pattern of the monitor.

Example of moire

Changing the menu's position

Change the menu's position if it is blocking an image on the screen.
To change the menu's on-screen position, first move the control button ↓/↑ to select (OSD H POSITION) for horizontal adjustment, or (OSD V POSITION) for vertical adjustment. Then move the control button ←/→ to shift the on-screen menu.

Locking the controls

To protect adjustment data by locking the controls, first move the control button ↓/↑ to select (CONTROL LOCK). Then move the control button →, to select ON.
Only the (power) switch, EXIT, and (CONTROL LOCK) of the OPTION menu will operate. If any other items are selected, the mark appears on the screen.

To cancel the control lock
Repeat the procedure above and set (CONTROL LOCK) to OFF.

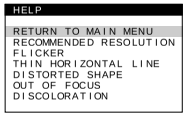
US

Helpful hints and information (HELP)

The HELP menu contains helpful hints and information about this monitor. If your monitor is displaying symptoms that match those listed in the HELP menu, follow the on-screen instructions to resolve the problem. If the symptoms do not match those listed in the HELP menu or if the problem persists, see "Trouble symptoms and remedies" on page 14.

1 **Press the center of the control button.**
The main MENU appears on the screen.

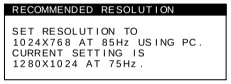
2 **Move the control button to highlight ? HELP and press the center of the control button again.**
The following HELP menu appears on the screen.



3 **Move the control button ↓/↑ to select a HELP menu item and press the center of the control button again.**
Instructions or information to resolve the problem appears on the screen. An explanation of each menu item is given below.

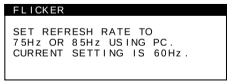
RECOMMENDED RESOLUTION

If the picture does not fill the screen to the edges or if the picture appears too large for the screen, adjust the resolution to the figures shown in the menu using your computer. If the input signal matches one of this monitor's factory preset modes, the resolution and refresh rate of the current input signal are displayed.



FLICKER

If the picture is flickering, adjust the refresh rate to figures shown in the menu. If the input signal matches one of this monitor's factory preset modes, the refresh rate of the current input signal is displayed.



THIN HORIZONTAL LINE

The lines that appear on your screen are damper wires. See page 13 for more information about the damper wires.

DISTORTED SHAPE

If the shape of the picture on the screen seems distorted, try adjusting the picture's geometry. Move the control button ➡ to jump directly to the GEOMETRY menu.

OUT OF FOCUS

The picture may seem to be out of focus when the red and blue color signals are not aligned properly, causing red or blue shadows to appear around letters and lines. Try adjusting the picture's convergence to make the shadows disappear. Move the control button ➡ to jump directly to the CONVERGENCE menu. When the CONVERGNECE menu is displayed, the contrast, brightness and moire adjustment settings are automatically reset for all input signals.

DISCOLORATION

If the picture's color appears abnormal in certain areas of the screen, first check for any loose signal cables. After you have checked the cables, try degaussing (demagnetizing) the screen manually. Move the control button ➡ to jump directly to the OPTION menu, then select (DEGAUSS).

Resetting the adjustments

This monitor has the following three reset methods. Use the RESET button to reset the adjustments.

RESET

Resetting a single adjustment item

Use the control button to select the adjustment item you want to reset, and press the RESET button.

Resetting all of the adjustment data for the current input signal

Press the RESET button when no menu is displayed on the screen. Note that the following items are not reset by this method:
- on-screen menu language (page 7)
- on-screen menu position (page 11)
- control lock (page 11)

Resetting all of the adjustment data for all input signals

Press and hold the RESET button for more than two seconds.

Note
The RESET button does not function when (CONTROL LOCK) is set to ON.

Technical Features

Preset and user modes

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture at the center of the screen. (See Appendix for a list of the factory preset modes.) For input signals that do not match one of the factory preset modes, the digital Multiscan technology of this monitor ensures that a clear picture appears on the screen for any timing in the monitor's frequency range (horizontal: 30 – 85 kHz, vertical: 48 – 120 Hz). If the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

Note for Windows users

For Windows users, check your video board manual or the utility program which comes with your graphic board and select the highest available refresh rate to maximize monitor performance.

Power saving function

This monitor meets the power-saving guidelines set by VESA, ENERGY STAR, and NUTEK. If the monitor is connected to a computer or video graphics board that is DPMS (Display Power Management Signaling) compliant, the monitor will automatically reduce power consumption in three stages as shown below.

Power mode	Power consumption	(power) indicator
normal operation	≤ 120 W	green
1 standby	≤ 15 W	green and orange alternate
2 suspend (sleep)*	≤ 15 W	green and orange alternate
3 active off** (deep sleep)*	≤ 3 W	orange
power off	0 W	off

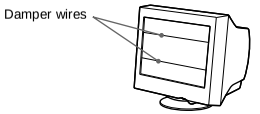
* "Sleep" and "deep sleep" are power saving modes defined by the Environmental Protection Agency.
** When your computer is in a power saving mode, MONITOR IS IN POWER SAVE MODE appears on the screen if you press any button on the monitor. After a few seconds, the monitor enters the power saving mode again.
*** Power consumption of 0 W is acheivable by disconnecting the power cord from the power outlet.

Troubleshooting

Before contacting technical support, refer to this section.

If thin lines appear on your screen (damper wires)

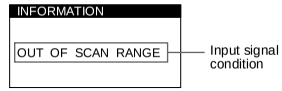
The lines you are experiencing on your screen are normal for the Trinitron monitor and are not a malfunction. These are shadows from the damper wires used to stabilize the aperture grille and are most noticeable when the screen's background is light (usually white). The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.



On-screen messages

US

If no picture appears on the screen, one of the following messages appears on the screen. To solve the problem, see "Trouble symptoms and remedies" on page 14.



The input signal condition
OUT OF SCAN RANGE
indicates that the input signal is not supported by the monitor's specifications.
NO INPUT SIGNAL
indicates that no signal is input.
MONITOR IS IN POWER SAVE MODE
indicates that the computer is in power saving mode. This message is displayed only when your computer is in a power saving mode and you press any one of the buttons on the monitor.

Trouble symptoms and remedies

If the problem is caused by the connected computer or other equipment, please refer to the connected equipment's instruction manual. Use the self-diagnosis function (page 16) if the following recommendations do not resolve the problem.

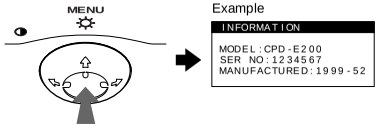
Symptom	Check these items
No picture	
If the ⏻ (power) indicator is not lit	• Check that the power cord is properly connected. • Check that the ⏻ (power) switch is in the "on" position.
If the NO INPUT SIGNAL message appears on the screen, or if the ⏻ (power) indicator is either orange or alternating between green and orange	• Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets (page 6). • Check that the HD15 video input connector's pins are not bent or pushed in. **■Problems caused by the connected computer or other equipment** • Check that the computer's power is "on." • Check that the graphic board is completely seated in the proper bus slot.
If the MONITOR IS IN POWER SAVE MODE message appeared on the screen, or if the ⏻ (power) indicator is either orange or alternating between green and orange	**■Problems caused by the connected computer or other equipment** • The computer is in power saving mode. Try pressing any key on the computer keyboard. • Check that the computer's power is "on." • Check that the graphic board is completely seated in the proper bus slot.
If the OUT OF SCAN RANGE message appears on the screen	**■Problems caused by the connected computer or other equipment** • Check that the video frequency range is within that specified for the monitor. If you replaced an old monitor with this monitor, reconnect the old monitor and adjust the frequency range to the following. Horizontal: 30 – 85 kHz Vertical: 48 – 120 Hz
If no message is displayed and the ⏻ (power) indicator is green or flashing orange	• Use the Self-diagnosis function (page 16).
If using Windows 95/98	• If you replaced an old monitor with this monitor, reconnect the old monitor and do the following. Install the Windows Monitor Information Disk (page 7) and select this monitor ("CPD-E200") from among the Sony monitors in the Windows 95/98 monitor selection screen.
If using a Macintosh system	• Check that the Macintosh adapter (not supplied) and the video signal cable are properly connected (page 6).
Picture flickers, bounces, oscillates, or is scrambled	• Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting, or televisions. • Move the monitor away from power lines or place a magnetic shield near the monitor. • Try plugging the monitor into a different AC outlet, preferably on a different circuit. • Try turning the monitor 90° to the left or right. **■Problems caused by the connected computer or other equipment** • Check your graphics board manual for the proper monitor setting. • Confirm that the graphics mode (VESA, Macintosh 16" Color, etc.) and the frequency of the input signal are supported by this monitor (Appendix). Even if the frequency is within the proper range, some video boards may have a sync pulse that is too narrow for the monitor to sync correctly. • Adjust the computer's refresh rate (vertical frequency) to obtain the best possible picture.
Picture is fuzzy	• Adjust the brightness and contrast (page 9). • Degauss the monitor* (page 11). • Select MOIRE ADJUST and adjust the moire cancellation effect (page 11).

Symptom	Check these items
Picture is ghosting	• Eliminate the use of video cable extensions and/or video switch boxes. • Check that all plugs are firmly seated in their sockets.
Picture is not centered or sized properly	• Adjust the size (page 9) or centering (page 9). Note that some video modes do not fill the screen to the edges.
Edges of the image are curved	• Adjust the geometry (page 10).
Wavy or elliptical pattern (moire) is visible	• Select MOIRE ADJUST and adjust the moire cancellation effect (page 11). **■Problems caused by the connected computer or other equipment** • Change your desktop pattern.
Color is not uniform	• Degauss the monitor* (page 11). If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity.
White does not look white	• Adjust the color temperature (page 10).
Letters and lines show red or blue shadows at the edges	• Adjust the convergence (page 10).
Monitor buttons do not operate	• If the control lock is set to ON, set it to OFF (page 11).
A hum is heard right after the power is turned on	• This is the sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for five seconds.

* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

Displaying this monitor's name, serial number, and date of manufacture.

While the monitor is receiving a video signal, press and hold the center of the control button for more than five seconds to display this monitor's information box.



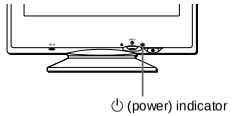
If the problem persists, call your authorized Sony dealer and give the following information.

- Model name: CPD-E200
- Serial number
- Name and specifications of your computer and graphics board.

US

Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the ⏻ (power) indicator will either light up green or flash orange. If the ⏻ (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard.

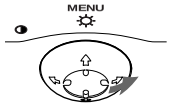


If the ⏻ (power) indicator is green

1 Disconnect the video input cable or turn off the connected computer.

2 Press the ⏻ (power) button twice to turn the monitor off and then on.

3 Move the control button ➡ for 2 seconds before the monitor enters power saving mode.



If all four color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cable and check the condition of your computer.

If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

If the ⏻ (power) indicator is flashing orange

Press the ⏻ (power) button twice to turn the monitor off and then on.
If the ⏻ (power) indicator lights up green, the monitor is working properly.

If the ⏻ (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and video board.

Specifications

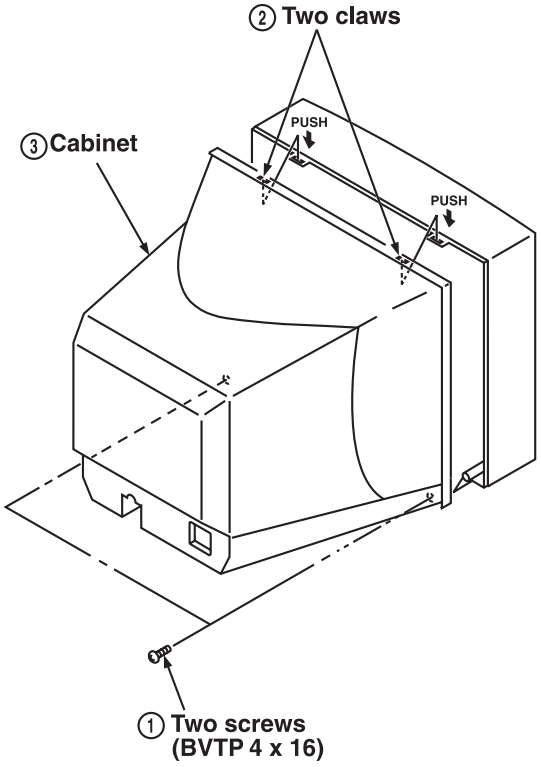
CRT	0.24 mm aperture grille pitch (center) 17 inches measured diagonally 90-degree deflection FD Trinitron
Viewable image size	Approx. 327 × 243 mm (w/h) (14 3/4 × 9 5/8 inches) 16.0" viewing image
Resolution	
Maximum	Horizontal: 1600 dots Vertical: 1200 lines
Recommended	Horizontal: 1024 dots Vertical: 768 lines
Standard image area	Approx. 312 × 234 mm (w/h) (12 3/8 × 9 1/4 inches)
Deflection frequency*	Horizontal: 30 to 85 kHz Vertical: 48 to 120 Hz
AC input voltage/current	100 to 240 V, 50 – 60 Hz, Max. 1.7 A
Power consumption	120 W
Dimensions	Approx. 404 × 413.5 × 419.5 mm (w/h/d) (16 × 16 3/8 × 16 5/8 inches)
Mass	Approx. 20 kg (44 lb 1 oz)
Plug and Play	DDC1/DDC2B/DDC2Bi
Supplied accessories	See page 6

* Recommended horizontal and vertical timing condition
- Horizontal sync width should be more than 1.0 µsec.
- Horizontal blanking width should be more than 3.0 µsec.
- Vertical blanking width should be more than 500 µsec.

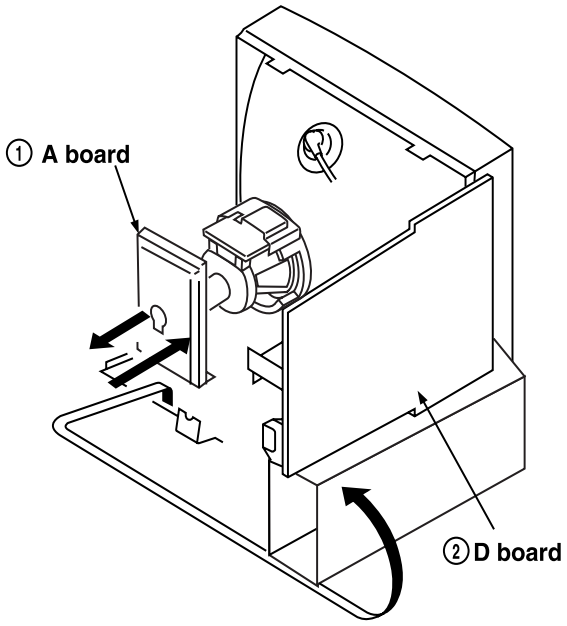
Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

2-1. CABINET REMOVAL

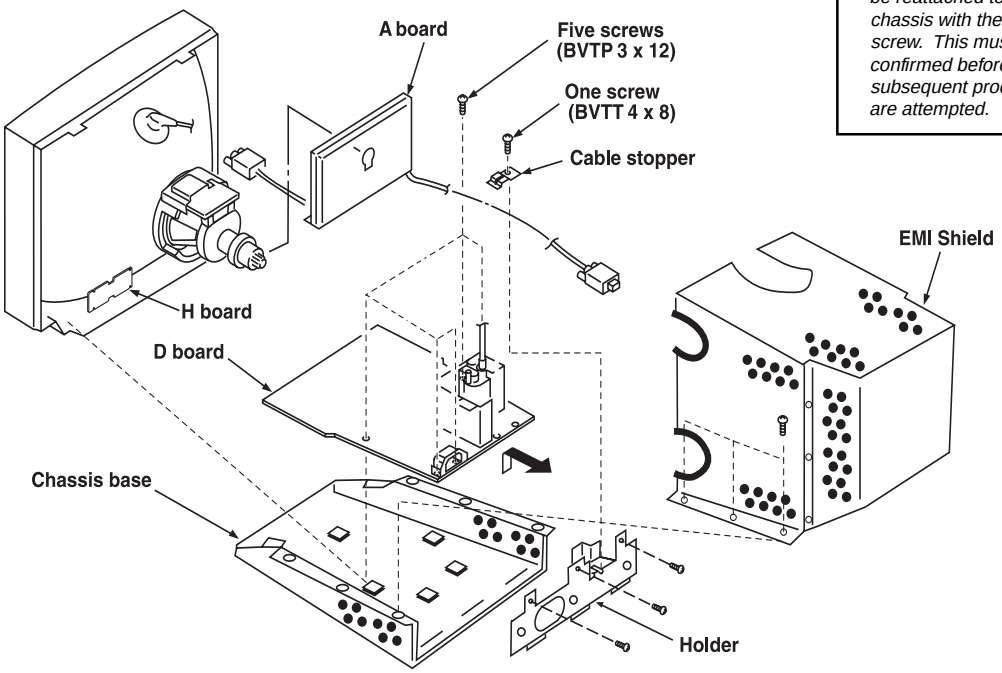


2-2. SERVICE POSITION

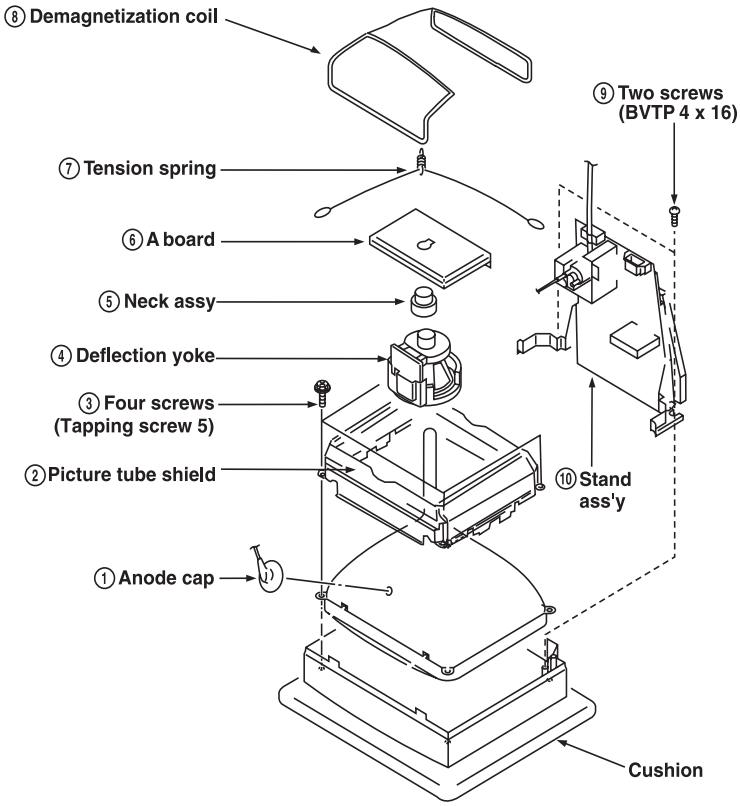


1 When the D board is placed in service position, the Safety Earth Wire (green and yellow wire) is disconnected.
2 After service is completed and the D-board reinstalled, the Safety Earth Wire must be reattached to the chassis with the proper screw. This must be confirmed before any subsequent procedures are attempted.

2-3. A, D & H BOARD REMOVAL



2-4. PICTURE TUBE REMOVAL

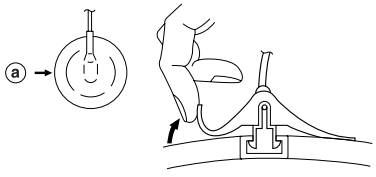


ANODE CAP REMOVAL

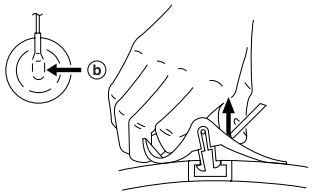
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT **before** attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.

NOTE: After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

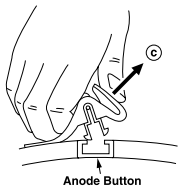
REMOVAL PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by arrow ⓐ.



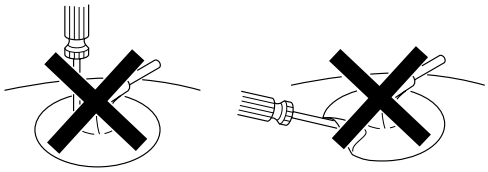
② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



③ When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ.

HOW TO HANDLE AN ANODE CAP

① Do not use sharp objects which may cause damage to the surface of the anode cap.
② Do not squeeze the rubber covering too hard to avoid damaging the anode cap. A material fitting called a shatter-hook terminal is built into the rubber.
③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 3
SAFETY RELATED ADJUSTMENTS

When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.

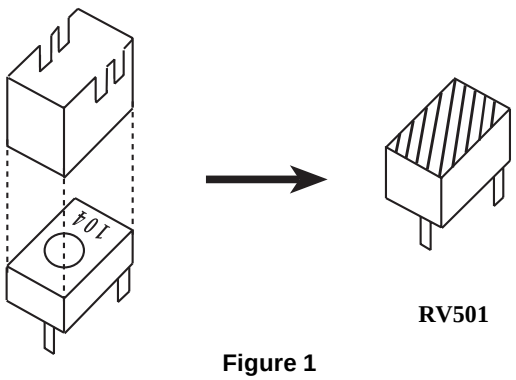
	Part Replaced (⋈)
HV ADJ	RV501

	Part Replaced (◪)	
HV Regulator Circuit	D board	T501, IC501, RV501, R540, R541, R542, R544, R564, R567, R568, C532, C534, C539, C553, C554, C555, C556, C558, C561
HV HOLD DOWN Circuit	D board	T501, R510, R543, R547, R549, R552, R595, D515, D517, C540, C542, C544, IC607, IC901
Beam Current Protector Circuit	D board	T501, R545, R546, R548, R550, R596, R934, C535, C541, IC605, IC607, IC901

Allow the unit to warm up for one minute prior to checking the following conditions:

a) HV Regulator Check

1) Input white cross hatch signal. (fH = 80 kHz)
2) CONT maximum and BRT center
3) Cut off Screen VR (G2).
4) Input voltage: 120 ± 2 VAC.
5) Confirm that the voltage is within the voltage range shown below.
   Standard voltage: 26.9 KV ± 0.4 KV
6) When replacing components identified by ◪, make sure to recheck the High Voltage.
7) Verify the High Voltage as shown above (26.9 KV ± 0.4 KV) is within specification. If not, adjust RV501 on D board.



RV501

Figure 1

8) After adjusting the High Voltage within specification, put the RV cover on RV501 as shown in Figure 1 and apply sufficient amount of RTV around RV501.

b) HV Protector Circuit Check

1) Confirm that the voltage between cathode of D517 and GND is more than 27.5 VDC.
2) Using an external DC Power supply, apply the voltage shown below between cathode of D517 on "D" and GND, and confirm that the HV Hold-Down circuit works. (Raster disappears) Apply DC Voltage: Less than 35.5 VDC.

Check Condition

- Input voltage: 100-120 VAC
- Input signal: (fH =80 kHz), White Cross Hatch
- Controls: CONT (max) & BRT (center)

c) Beam Protector Check (Software logic)

1) Using an external current source, apply < 1.55mA between pin ⑪ of FBT (T501) and GND, and confirm that the raster fades out.

Check Condition

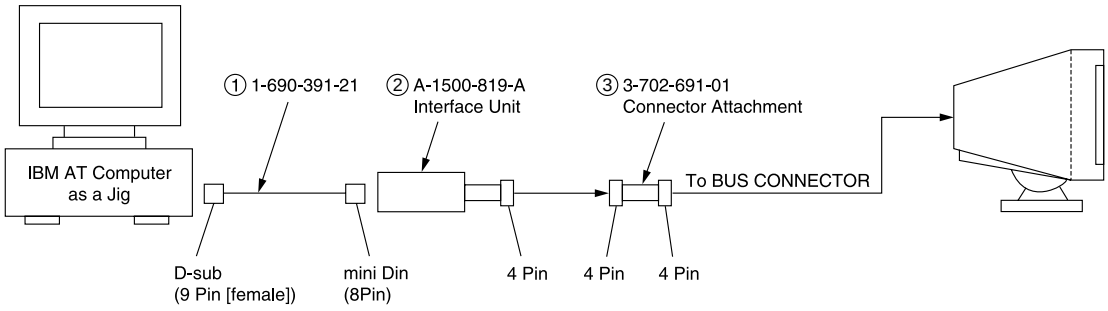
- Input voltage: 100-120 VAC
- Input signal : (fH = 80 kHz), White Cross Hatch
- Controls: CONT (max) & BRT (center)

d) B+ Voltage Check

1) Input white cross hatch (fH = 80 kHz) signal.
2) CONT (max) & BRT (center).
3) Input voltage: 100-120 VAC.
   Note: Use NF power supply or make sure that distortion factor is 3% or less.
4) Confirm that the voltage is within the voltage range shown below.
   Standard voltage: 180 ± 3.0 VDC

SECTION 4
ADJUSTMENTS

Connect the communication cable of the connector located on the D board on the monitor. Run the service software and then follow the instructions.



*The parts above (①~③) are necessary for DAS adjustment.

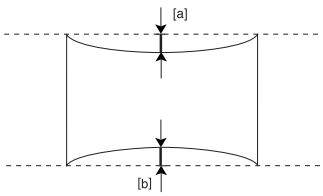
※ Allow a 30 minute warm-up period prior to making the following adjustments:

4-1. LANDING ROUGH ADJUSTMENT

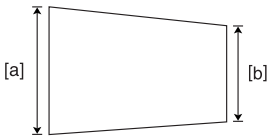
1. Display the all white pattern.
2. Adjust the contrast to maximum value.
3. Display the plain green pattern.
4. Slide the DY back and roughly adjust the plain green pattern with the purity magnet so that it is centered on the screen.
5. Moving the DY forward, adjust so that an entire screen becomes pure green.
6. Adjust the tilt of DY and tighten lightly with a clamp.

4-2. LANDING FINE ADJUSTMENT

1. Place the monitor in the Helmholtz coil.
2. Set TLH plate to zero position.
3. Display plain green pattern.
4. Degauss CRT face and iron parts with degauss equipment or hand-degausser.
5. Perform auto degauss.
6. Attach a wobbling coil to the specified position of CRT neck.
7. Put the sensor of landing checker to CRT face.
8. Adjust purity, DY position and DY tilt.
9. Tighten DY screw.
10. Perform auto degauss.
11. Adjust top and bottom pin by pitching DY up and down with two wedges so that [a] is equal to [b].



12. Adjust V. Key (=H. Trapezoid) with H-Trp VR so that [a] is equal to [b].

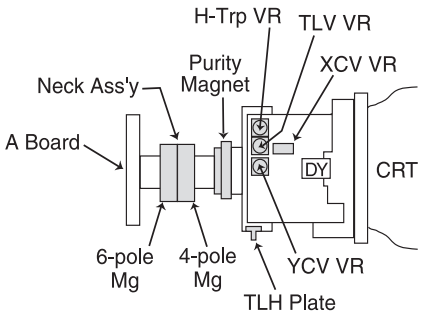


13. If the corner landing is out of specification, use a disk magnet for the landing correction.
14. If disk magnets were used, perform an auto degauss.
15. Remove the wobbling coil and sensor.
16. Fix the purity magnet on DY with white paint.

4-3. CONVERGENCE ROUGH ADJUSTMENT

1. Enter the white crosshatch signal.
2. Roughly adjust the horizontal (H.STAT) and vertical (V.STAT) convergence at four-pole magnet.
3. Roughly adjust HMC and VMC at six-pole magnet.

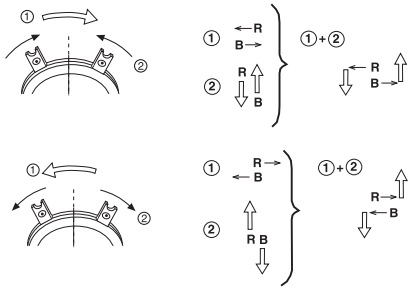
4-4. CONVERGENCE AND V. KEY (H. TRP) FINE ADJUSTMENT



1. Change "CONV_OFF_NDX" to "7".

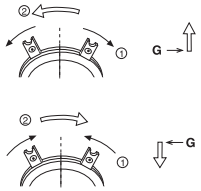
2. Display crosshatch pattern with red and blue lines and black field.
3. Adjust H.STAT and V.STAT with 4 pole magnet. Use 4 pole magnet, not "HSTAT" and "VSTAT".

4-Pole Magnet



4. Display crosshatch pattern with white lines and black field.
5. Adjust HMC and VMC with 6-pole magnet.

6-Pole Magnet

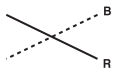


6. Display crosshatch pattern with red and blue lines and black field.
7. If necessary, repeat steps 3-6.
8. Change "CONV_OFF_NDX" to "3".
9. Adjust H.TILT with TLH plate.

TLH Movement

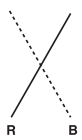
10. Adjust XCV with XCV VR.

XCV Movement



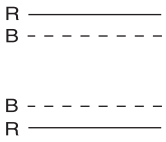
11. Adjust YCH with YCH VR.

YCH Movement



12. Adjust V.TILT with TLV VR.

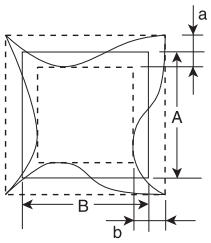
TLV Movement



13. If necessary, repeat steps 1-12 to make the optimum condition for the entire screen.
14. Fix 4-pole magnet, 6-pole magnet, XCV VR and TLH Plate with white paint.

Zero Position Neck Ass'y

4-5. VERTICAL AND HORIZONTAL POSITION AND SIZE SPECIFICATION

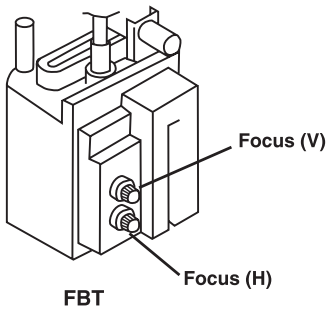


	$f_H \geq 60kHz$	$f_H < 60kHz$
a =	2.0 mm	2.5 mm
b =	2.0 mm	2.5 mm

A	B
234	312

4-6. FOCUS ADJUSTMENT

Adjust focus (V) and focus (H) for optimum focus.

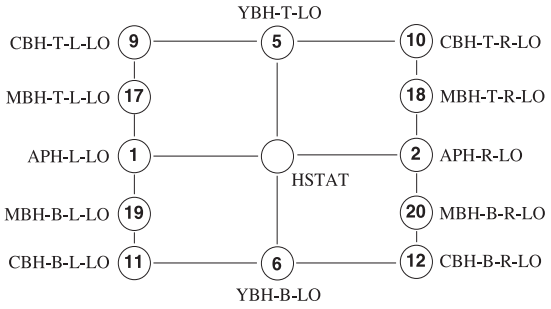


4-7. DIGITAL CONVERGENCE ADJUSTMENT

Convergence (Low) Mode

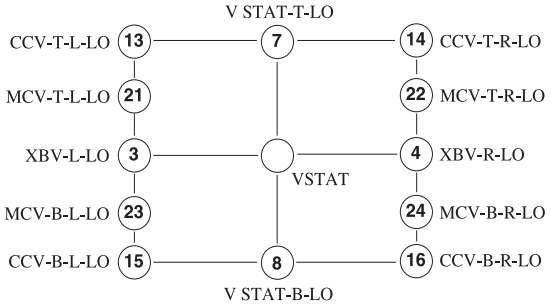
1. Adjust the H.STAT and V.STAT with "HSTAT" and "VSTAT".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

B. Vertical Convergence



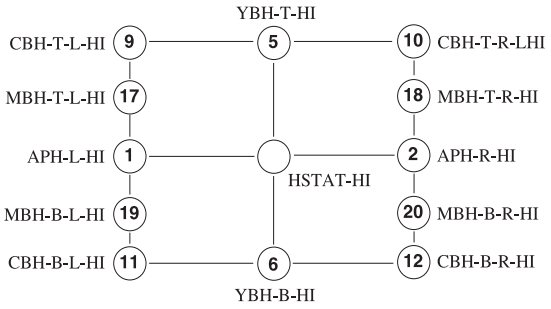
Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

Convergence (High) Mode

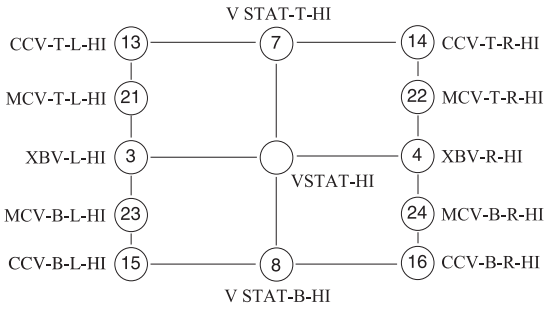
1. Adjust the H.STAT and V.STAT with "HSTAT-HI" and "VSTAT-HI".

A. Horizontal Convergence



Adjust each misconvergence point in sequence.

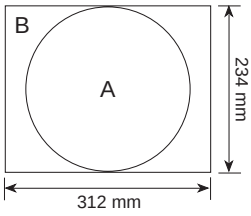
B. Vertical Convergence



Adjust each misconvergence point in sequence.

2. Repeat the procedure of A and B so that the convergence of the entire screen is within the specification.

4-8. CONVERGENCE SPECIFICATION



A Zone:

Primary Mode	Others
H: ≤ 0.25mm	H: ≤ 0.3mm
V: ≤ 0.25mm	V: ≤ 0.3mm

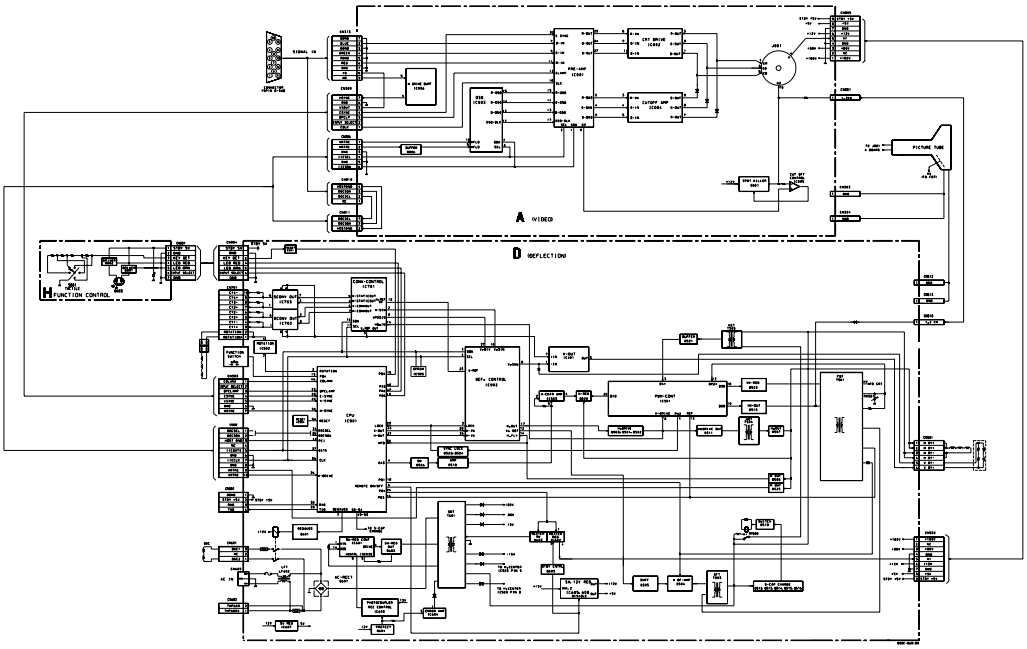
B Zone:

Primary Mode	Others
H: ≤ 0.3mm	H: ≤ 0.4mm
V: ≤ 0.3mm	V: ≤ 0.4mm

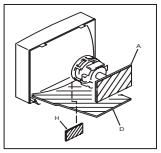
NOTES:

SECTION 5
DIAGRAMS

5-1. BLOCK DIAGRAM



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. pF: µpF. 50 WV or less are not indicated except for electrolytic.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Rich: Lean
Rating electrical power 1/4 W (CHIP: 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground
- : earth-chassis.
- The components identified by ▮▮ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments by using RV501 (▮▮) as indicated. (See page 14)

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifies par un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

- When replacing parts shown in the table below, be sure to perform the safety related adjustment.

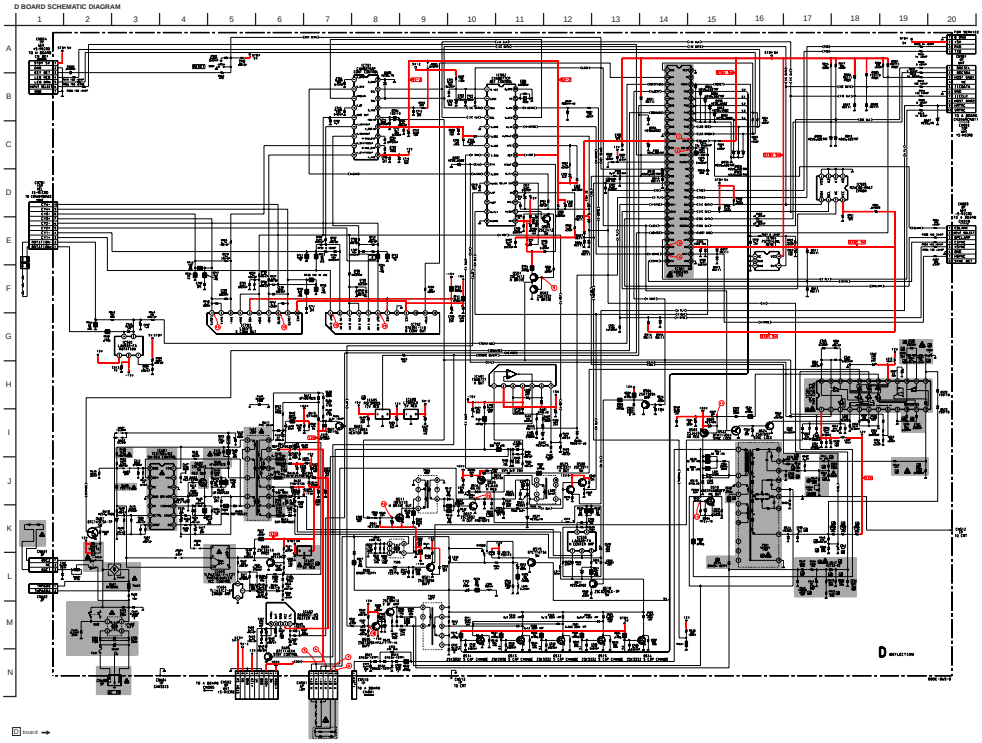
	Part Replaced (▮)
HV ADJ	RV501

	Part Replaced (◪)
HV Regulator Circuit	D board T501, IC501, RV501, R540, R541, R542, R544, R564, R567, R568, C532, C534, C539, C553, C554, C555, C556, C558, C561
HV HOLD DOWN Circuit	D board T501, R510, R543, R547, R549, R552, R595, D515, D517, C540, C542, C544, IC507, IC901
Beam Current Protector Circuit	D board T501, R545, R546, R548, R550, R596, R934, C535, C543, IC505, IC507, IC901

- All voltages are in volts.
- Readings are taken with a 10 MΩ digital multimeter
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.
- * : Cannot be measured.
- Circled numbers are waveform references.
- : B - bus.
- : B - bus.

CPD-E210

D BOARD SCHEMATIC DIAGRAM

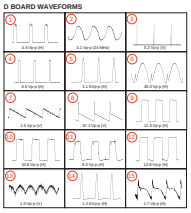


D BOARD IC VOLTAGE LIST

IC001		2	1.1	3	NC	12	4.9	4	2.4	42	NC	22	10.1
pin	volt	3	-14.8	4	0	13	5.0	5	NC	43	NC	23	5.0
1	1.6	4	15.8	5	0	14	5.0	6	4.9	44	2.3	24	1.6
2	15.1	5	14.8	6	0	15	1.1	7	0	45	9.3	25	9.5
3	14.4	IC003		IC004		16	4.2	8	0	46	9.3	26	9.5
4	15.1	pin	volt	pin	volt	17	4.6	9	NC	47	4.4	27	4.9
5	0.2	1	105.0	1	2.5	18	GND	10	GND	48	0.1	28	0
6	14.8	2	102.6	2	GND	IC700		11	5.1	49	0.4	29	0.4
7	1.6	3	91.0	3	6.3	pin	volt	12	0	50	0.4	30	GND
IC051		4	101.7	IC006		1	0.2	13	0	51	4.9	IC004	
pin	volt	5	112.4	pin	volt	2	2.5	14	4.7	52	0.4	pin	volt
1	11.9	IC051		1	14.6	3	2.5	15	4.9	53	0.4	1	GND
2	4.1	pin	volt	2	11.9	4	2.5	16	3.9	54	4.9	2	GND
3	4.1	1	152.6	G	GND	5	2.5	17	2.5	55	NC	3	GND
4	5.3	2	NC	4	4.8	6	-0.1	18	3.7	56	GND	4	4.9
5	8.9	3	GND	IC007		7	-14.5	19	0	IC008		5	5.0
6	4.0	4	2.3	pin	volt	8	GND	20	0.1	pin	volt	IC020	
7	GND	5	0	1	8.9	9	14.7	21	5.0	1	2.2	pin	volt
8	0.1	6	12.4	2	5.0	10	NC	22	0.2	2	4.7	1	GND
9	GND	7	12.2	G	GND	11	3.2	23	4.7	3	4.2	2	GND
10	8.3	8	2.5	IC008		12	NC	24	5.0	4	4.6	3	GND
11	4.5	9	2.8	pin	volt	IC705		25	0	5	GND	4	GND
12	5.0	10	NC	1	11.9	pin	volt	26	0	6	4.0	5	4.2
13	5.8	11	GND	G	5.0	1	-0.3	27	0.5	7	5.6	6	4.6
14	5.8	12	NC	2	GND	2	-0.3	28	0.5	8	4.9	7	5.0
15	5.0	13	0.9	IC701		3	3.8	29	GND	9	4.1	8	5.0
16	11.4	14	5.9	pin	volt	4	3.8	30	0.5	10	5.0		
17	11.9	IC052		1	4.9	5	14.5	31	5.0	11	5.0		
18	6.0	pin	volt	2	4.9	6	3.8	32	0.9	12	4.7		
19	8.0	1	3.1	3	4.9	7	3.8	33	0.5	13	NC		
20	5.2	2	8.5	4	4.9	8	0.7	34	4.7	14	0.9		
21	GND	3	GND	5	5.0	9	0.6	35	4.7	15	GND		
22	4.6	4	6.3	6	5.0	10	14.7	36	0.5	16	11.9		
23	4.1	5	1.2	7	5.0	IC051		37	4.0	17	0.4		
24	4.1	IC053		8	5.0	pin	volt	38	5.0	18	5.6		
IC052		pin	volt	9	4.9	1	4.8	39	0.5	19	9.6		
pin	volt	1	8.6	10	11.9	2	5.0	40	NC	20	9.2		
1	11	2	7.5	11	4.5	3	2.3	41	NC	21	3.2		

All voltages are in V

D BOARD WAVEFORMS



D BOARD TRANSISTOR VOLTAGE LIST

	G	D	S
Q500	175.4	100.0	178.3
Q504	5.0	178.5	0.4
Q510	6.0	96.8	GND
Q511	-1.9	-10.6	-14.4
Q512	0	-4.6	GND
Q513	0.3	39.3	GND
Q514	0.3	40.3	GND
Q515	0.3	39.9	GND
Q516	0.3	38.8	GND
Q520	175.0	102.5	178.3
Q530	2.4	134.0	0.1

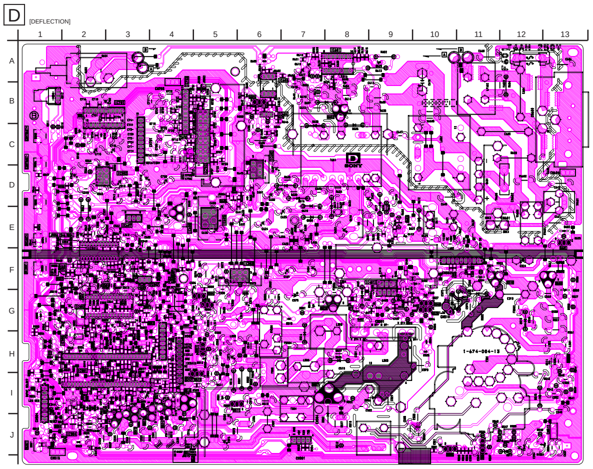
All voltages are in V

D BOARD TRANSISTOR VOLTAGE LIST

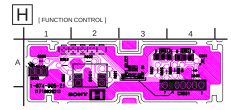
	B	C	E
Q501	5.5	11.5	5.5
Q502	5.5	GND	5.5
Q503	0.6	-14.0	0.5
Q506	2.0	GND	2.0
Q507	-0.7	54.0	GND
Q508	0.7	11.8	0.1
Q518	2.6	103.0	2.0
Q519	0.3	11.8	GND
Q521	5.0	GND	5.0
Q522	4.7	GND	4.8
Q524	4.7	GND	5.3
Q525	0.7	11.8	0.1
Q551	0	11.3	GND
Q553	5.0	0	GND
Q554	0	7.6	GND
Q555	4.8	0	GND
Q603	0.4	5.5	GND

All voltages are in V

D [DEFLECTION]



H [FUNCTION CONTROL]



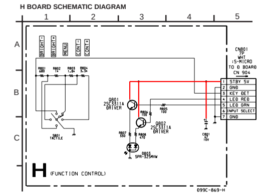
H BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q801	4.6	5.1	4.0
Q802	4.9	5.1	4.2

All voltages are in V

NOTE:
Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

H BOARD SCHEMATIC DIAGRAM

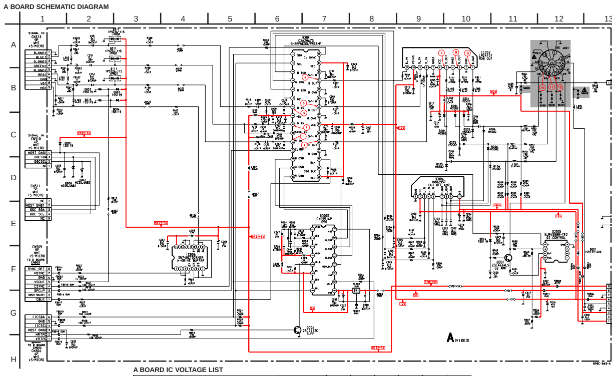


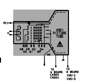
D BOARD LOCATOR LIST

DIODE		D518	G-7	D612	E-10	D909	J-4	D930	H3	IC701	B-3	Q514	I-3
D401	F-9	D519	G-7	D613	E-9	D910	J-4	D931	I2	IC702	C-5	Q515	I-3
D402	F-10	D520	G-11	D614	D-8	D911	H-3	D932	I2	IC703	B-4	Q516	I-3
D403	F-10	D521	G-11	D615	D-7	D913	F-4	D933	I2	IC901	H-3	Q518	G-5
D404	F-10	D522	J-2	D616	D-7	D914	H-3	D934	I2	IC902	G-3	Q519	H-5
D501	I-5	D523	J-2	D617	D-9	D915	J-4	D935	E2	IC904	I-1	Q520	G-8
D502	I-8	D524	H-10	D618	E-8	D916	H-3	D936	H-3	IC905	G-2	Q521	H-5
D504	F-11	D525	H-10	D619	D-7	D917	H-5	D937	F-3	TRANSISTOR		Q522	F-1
D505	H-8	D527	F-10	D620	B-7	D918	H-3	IC		Q501	G-4	Q524	F-2
D506	I-9	D601	D-11	D621	E-10	D919	H-3	IC401	F-9	Q502	G-4	Q525	G-10
D507	G-4	D602	E-13	D622	E-7	D920	G-2	IC501	E-2	Q503	F-13	Q601	E-13
D509	F-13	D603	D-6	D704	C-3	D921	H-2	IC502	D-3	Q504	J-11	Q602	B-8
D510	F-11	D604	B-6	D901	I-3	D922	F-4	IC503	F-6	Q505	J-10	Q603	E-9
D511	F-5	D605	A-6	D902	H-3	D923	F-4	IC601	A-8	Q506	F-5	Q604	B-6
D512	H-5	D606	B-8	D903	F-4	D924	G-3	IC602	C-6	Q507	I-8	Q605	D-5
D513	G-12	D607	B-8	D904	I-2	D925	H-3	IC603	A-7	Q508	G-10	Q903	G-3
D514	H-13	D608	B-8	D905	G-1	D926	H-3	IC604	B-7	Q510	F-11		
D515	H-13	D609	A-7	D906	G-1	D927	H-3	IC605	E-5	Q511	I-6		
D516	G-7	D610	A-7	D907	G-3	D928	H-2	IC607	E-3	Q512	I-3		
D517	J-12	D611	E-10	D908	H-3	D929	H-2	IC608	E-5	Q513	I-3		

← D H boards A board →

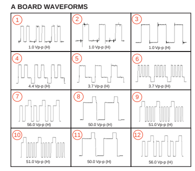
A BOARD SCHEMATIC DIAGRAM

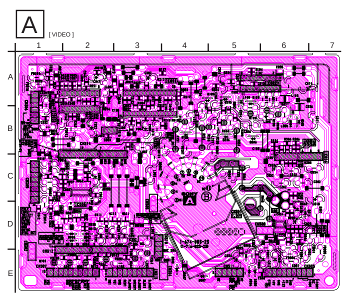




NOTE: Portions of the circuit marked as shown are high voltage areas. Use care to prevent electric shocks during inspection or repair.

A BOARD WAVEFORMS





A BOARD TRANSISTOR VOLTAGE LIST

	B	C	E
Q001	11.4	441.0	10.9
Q006	-0.2	3.8	GND

All voltages are in V

A BOARD IC VOLTAGE LIST

IC001		14	0	29	11.8	IC003		14	0.0	11	177.7	3	0.0
pin	volt	15	0	30	2.6	pin	volt	15	0.0	IC005		4	0.4
1	4.2	16	11.8	IC002		1	0.5	16	GND	pin	volt	5	4.6
2	4.6	17	0	pin	volt	2	1.1	IC004		1	NC	6	4.6
3	2.4	18	1.0	1	55.6	3	1.1	pin	volt	2	NC	7	GND
4	2.8	19	GND	2	GND	4	5.0	1	GND	3	NC	8	0.3
5	2.5	20	2.0	3	57.5	5	3.8	2	11.8	4	GND	9	0.3
6	2.8	21	3.5	4	GND	6	5.0	3	4.8	5	2.8	10	4.6
7	2.0	22	11.8	5	54.2	7	4.2	4	4.8	6	2.7	11	GND
8	4.8	23	GND	6	80.5	8	4.6	5	4.8	7	10.4	12	GND
9	2.0	24	1.9	7	GND	9	5.0	6	NC	8	11.8	13	NC
10	3.0	25	3.5	8	2.1	10	0.0	7	93.3	IC006		14	5.0
11	2.0	26	GND	9	1.9	11	NC	8	95.0	pin	volt		
12	0.1	27	2.0	10	11.8	12	0.0	9	89.6	1	NC		
13	0	28	3.5	11	2.0	13	0.0	10	NC	2	0.0		

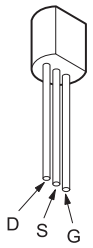
All voltages are in V

A BOARD LOCATOR LIST

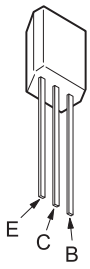
DIODE		D105	B-5	IC	
D001	D-7	D106	B-4	IC001	A-3
D002	D-2	D111	D-2	IC002	A-5
D003	D-2	D204	B-6	IC003	B-2
D004	D-2	D205	B-5	IC004	C-6
D005	E-5	D206	B-5	IC005	D-6
D007	E-4	D211	D-3	IC006	D-2
D008	E-4	D304	B-6	TRANSISTORS	
D014	D-6	D305	B-6	Q001	D-6
D015	D-2	D306	B-6	Q006	C-2
D104	B-5	D311	D-3		

5-4. SEMICONDUCTORS

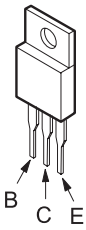
2SK3332



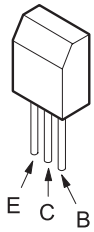
DTC143ESA



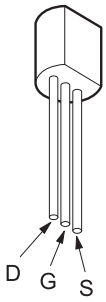
2SC4634LS-CB11



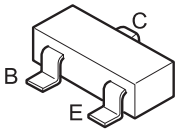
2SC3209LK-TP



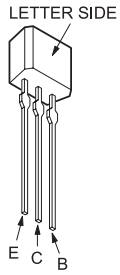
2SJ449(1)



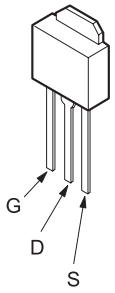
2SC2412K-T-146-QR
2SA1037AK-T146-R
2SC3941A-Q(TA)
DTA114EKA-T146



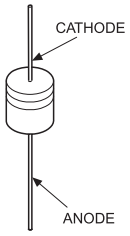
DTC114EKA-T146
2SC3311A-QRSTA
2SA1309A-QRSTA



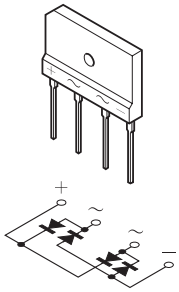
2SK2098-01MR-F119
2SK2843LBSSONY
IRFU110



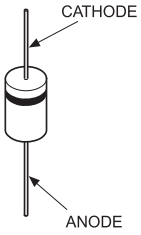
1SR139-400T31
HZ55.6NB2TD
HZS4.7NB2TD
HZS12NB2TD
HZS1ONB2TD
1SS119-25
MTZJ-T-77-18



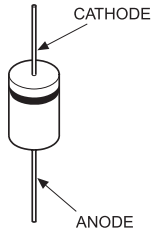
D4SB60L



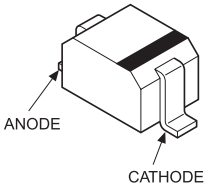
D3S4M
HZS5.1NB2TD
ERA34-10TP1
HZT33-02TE
EGP10DPKG23
RGP10JPKG23



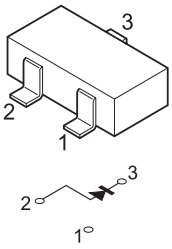
RGP10DG23
HZU5.6B2TRF
D1NS6
D1NL40-TA
UF4007G23
ERB91-02



HSS82



RB441QT-77



SECTION 6
EXPLODED VIEWS

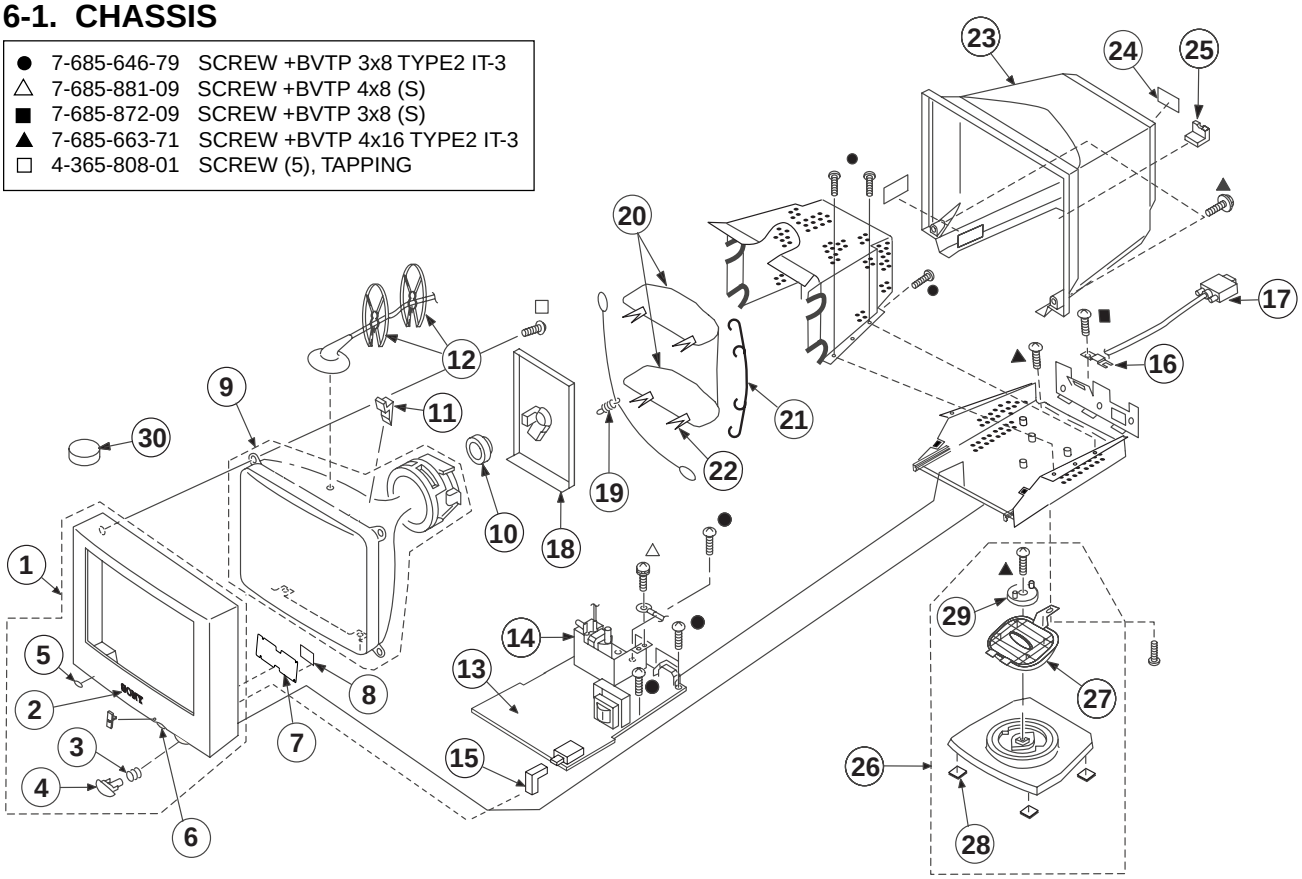
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The component parts of an assembly are indicated by the reference numbers in the remarks column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

6-1. CHASSIS

●	7-685-646-79	SCREW +BVTP 3x8 TYPE2 IT-3
△	7-685-881-09	SCREW +BVTP 4x8 (S)
■	7-685-872-09	SCREW +BVTP 3x8 (S)
▲	7-685-663-71	SCREW +BVTP 4x16 TYPE2 IT-3
□	4-365-808-01	SCREW (5), TAPPING



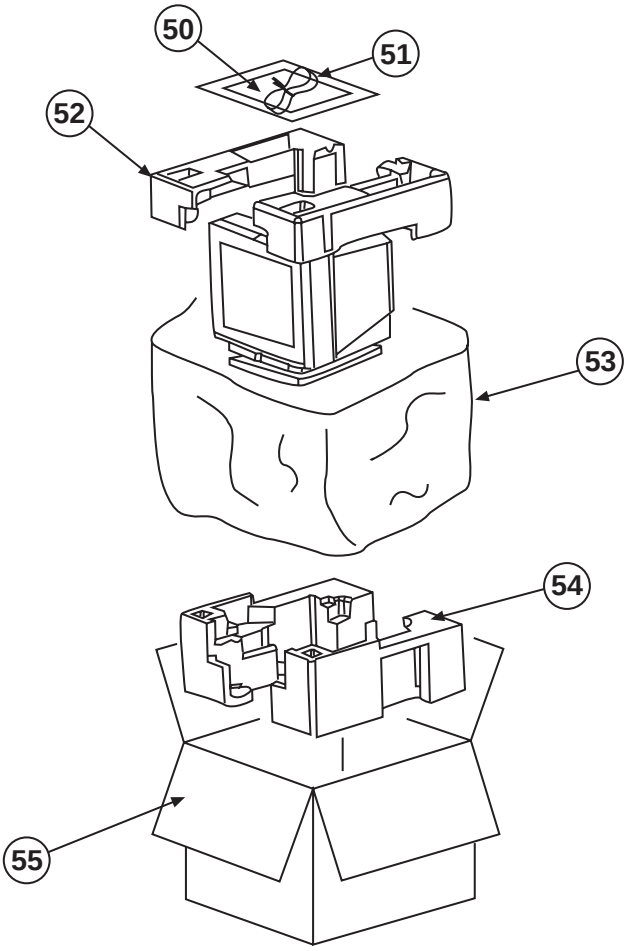
REF.NO.		PART NO.	DESCRIPTION	REMARK
1		X-4037-432-1	BEZEL ASSY	2-5
2		4-042-353-41	EMBLEM (NO. 7), SONY	
3		3-653-339-21	SPRING, COMPRESSION	
4		4-071-152-02	BUTTON, POWER	
5		4-071-154-02	BUTTON, RESET	
6		4-071-155-01	BUTTON, MENU	
7	*	A-1372-697-A	H MOUNTED PC BOARD	
8	*	4-071-145-01	BRACKET, H	
9	⚠	8-738-550-61	ITC ASSY 17TKB-R1	
10	⚠	1-452-923-41	NECK ASSEMBLY (NA-2915)	
11		4-040-897-01	SPACER, DY	
12		3-704-372-31	HOLDER, HV CABLE	
13	*	A-1346-865-A	D COMPLETE PC BOARD	
14	⚠	1-453-311-11	FBT ASSY NX-4404//X4L4	
15		4-071-146-01	CAP, POWER	
16	*	4-045-131-01	STOPPER, CABLE	
17		1-791-490-11	CABLE ASSY(15PD-SUB CONNECTOR)	

REF.NO.		PART NO.	DESCRIPTION	REMARK
18	*	A-1294-771-A	A MOUNTED PC BOARD	
19	*	4-061-573-01	SPRING, TENSION	
20	⚠	1-419-092-11	COIL, DEGAUSSING	
21	*	4-371-521-01	BAND (L), DEGAUSS COIL	
22		4-045-123-01	HOLDER, DEGAUSSING COIL	
23	*	4-071-147-03	CABINET	
24	*	4-074-117-01	LABEL, INFORMATION	
25		4-071-156-01	COVER, CABLE	
26		X-4036-850-1	BASE ASSY, STAND	27-29
27		4-071-149-01	SLIDER	
28	*	4-060-533-01	CUSHION	
29		4-071-150-01	STOPPER, A	
30		1-452-032-00	MAGNET,DISC	

The components identified with gray shading and a critical symbol (⚠) are critical for safety. Replace only with part number specified.

Les composantsidentifies per un trame et une marque ⚠ sont critiques pout le securite. Ne les remplacer que par une piece portant le numero specifie.

6-2. PACKING MATERIALS



REF.NO.		PART NO.	DESCRIPTION	REMARK
50		4-074-038-11	MANUAL, INSTRUCTION	
51	⚠	1-790-568-11	CORD SET, POWER	
52	*	4-070-972-01	CUSHION ASSY, UPPER	
53		4-041-927-11	BAG, POLYETHYLENE	
54	*	4-070-969-01	CUSHION ASSY, LOWER	
55	*	4-074-039-01	CARTON, INDIVIDUAL	

SECTION 7
ELECTRICAL PARTS LIST

A

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

- The components identified by ⋈ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

A

REF. NO.	PART NO.	DESCRIPTION	REMARK
*	A-1294-771-A	A MOUNTED PC BOARD	
	4-382-854-01	SCREW (M3X8), P, SW (+)	

CAPACITOR

C001	1-162-318-11	CERAMIC	0.001µF	10%	500V
C002	1-106-220-00	MYLAR	0.1µF	10%	100V
C004	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C007	1-104-664-11	ELECT	47µF	20%	25V
C008	1-104-664-11	ELECT	47µF	20%	25V
C009	1-126-934-11	ELECT	220µF	20%	10V
C010	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C011	1-106-220-00	MYLAR	0.1µF	10%	100V
C012	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C014	1-107-932-11	ELECT	47µF	20%	100V
C015	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C016	1-128-528-11	ELECT	470µF	20%	16V
C017	1-104-664-11	ELECT	47µF	20%	25V
C018	1-107-961-91	ELECT	10µF	20%	250V
C022	1-104-664-11	ELECT	47µF	20%	25V
C027	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C028	1-104-664-11	ELECT	47µF	20%	25V
C029	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C032	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C033	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C035	1-162-134-11	CERAMIC	470PF	10%	2KV
C036	1-104-503-12	CERAMIC CHIP	0.1µF	10%	100V
C042	1-163-275-11	CERAMIC CHIP	0.001µF	5%	50V
C044	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C046	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C047	1-104-664-11	ELECT	47µF	20%	25V
C049	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C050	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C053	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C054	1-137-528-11	MYLAR	0.1µF	10%	250V
C055	1-104-503-12	CERAMIC CHIP	0.1µF	10%	100V
C061	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C090	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C092	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C102	1-137-528-11	MYLAR	0.1µF	10%	250V
C104	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C105	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C106	1-137-528-11	MYLAR	0.1µF	10%	250V
C112	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C130	1-216-295-91	SHORT			
C151	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C202	1-137-528-11	MYLAR	0.1µF	10%	250V
C204	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C205	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C206	1-137-528-11	MYLAR	0.1µF	10%	250V
C212	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C230	1-216-295-91	SHORT			
C251	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C302	1-137-528-11	MYLAR	0.1µF	10%	250V
C304	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C305	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C306	1-137-528-11	MYLAR	0.1µF	10%	250V
C312	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C330	1-216-295-91	SHORT			
C351	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V

CONNECTOR

CN301		1-506-108-41	PIN, CONNECTOR (TERMINAL PIN)
CN303		1-695-915-11	TAB (CONTACT)
CN304		1-695-915-11	TAB (CONTACT)
CN305	*	1-564-512-11	PLUG, CONNECTOR, 9P
CN306	*	1-564-509-11	PLUG, CONNECTOR 6P
CN309	*	1-564-511-11	PLUG, CONNECTOR 8P
CN310	*	1-564-507-11	PLUG, CONNECTOR 4P
CN311	*	1-564-508-11	PLUG, CONNECTOR 5P
CN313	*	1-564-512-11	PLUG, CONNECTOR 9P

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
	DIODE		
D001	8-719-970-02	DIODE 1SR139-400T31	
D002	8-719-911-19	DIODE 1SS119-25	
D003	8-719-911-19	DIODE 1SS119-25	
D004	8-719-911-19	DIODE 1SS119-25	
D005	8-719-911-19	DIODE 1SS119-25	
D007	8-719-109-89	DIODE RD5.6ESB2	
D008	8-719-109-89	DIODE RD5.6ESB2	
D014	8-719-911-19	DIODE 1SS119-25	
D015	8-719-911-19	DIODE 1SS119-25	
D104	8-719-970-83	DIODE HSS82	
D105	8-719-970-83	DIODE HSS82	
D106	8-719-970-83	DIODE HSS82	
D111	8-719-062-51	DIODE 1PS226-115	
D204	8-719-970-83	DIODE HSS82	
D205	8-719-970-83	DIODE HSS82	
D206	8-719-970-83	DIODE HSS82	
D211	8-719-062-51	DIODE 1PS226-115	
D304	8-719-970-83	DIODE HSS82	
D305	8-719-970-83	DIODE HSS82	
D306	8-719-970-83	DIODE HSS82	
D311	8-719-062-51	DIODE 1PS226-115	
	FERRITE BEAD		
FB001	1-412-911-11	FERRITE	0µH
FB004	1-412-911-11	FERRITE	0µH
FB005	1-412-911-11	FERRITE	0µH
FB006	1-412-911-11	FERRITE	0µH
FB009	1-412-911-11	FERRITE	0µH
FB010	1-412-911-11	FERRITE	0µH
FB011	1-412-911-11	FERRITE	0µH
FB012	1-412-911-11	FERRITE	0µH
FB102	1-216-295-91	SHORT	0
FB202	1-216-295-91	SHORT	0
FB302	1-216-295-91	SHORT	0
	FILTER		
FL002	1-412-911-11	FERRITE	0µH
	IC		
IC001	8-752-090-63	IC CXA2067S	
IC002	8-759-593-11	IC LM2415T	
IC003	8-759-589-35	IC CXD9516P	
IC004	8-749-016-27	IC H8D2957	
IC005	8-759-100-96	IC NJM4558M-TE2	
IC006	8-759-269-07	IC SN74HCT02ANSR	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	JACK		
J001 ⚠	1-251-598-11	SOCKET, CRT	
	CHIP CONDUCTOR		
JR002	1-216-296-91	SHORT	
JR005	1-216-296-91	SHORT	
JR006	1-216-296-91	SHORT	
JR007	1-216-296-91	SHORT	
JR016	1-216-296-91	SHORT	
JR017	1-216-296-91	SHORT	
JR018	1-216-295-91	SHORT	
JR019	1-216-296-91	SHORT	
JR020	1-216-296-91	SHORT	
JR021	1-216-296-91	SHORT	
	COIL		
L002	1-410-682-31	INDUCTOR	470µH
L003	1-408-397-00	INDUCTOR	1µH
L005	1-412-529-11	INDUCTOR	22µH
L007	1-410-482-31	INDUCTOR	100µH
L009	1-216-295-91	SHORT	
L010	1-412-911-11	FERRITE	0µH
L102	1-412-052-21	INDUCTOR CHIP	1µH
L103	1-414-137-31	INDUCTOR	0.22µH
L105	1-410-750-41	INDUCTOR	0.47µH
L203	1-414-137-31	INDUCTOR	0.22µH
L205	1-410-750-41	INDUCTOR	0.47µH
L303	1-414-137-31	INDUCTOR	0.22µH
L305	1-410-750-41	INDUCTOR	0.47µH
	TRANSISTOR		
Q001	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q006	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
	RESISTOR		
R002	1-240-978-91	METAL CHIP	560 5% 1/10W
R003	1-240-992-91	METAL CHIP	8.2K 5% 1/10W
R004	1-240-984-91	METAL CHIP	1.8K 5% 1/10W
R005	1-242-774-91	METAL CHIP	330K 5% 1/10W
R006	1-240-969-91	METAL CHIP	100 5% 1/10W
R007	1-240-969-91	METAL CHIP	100 5% 1/10W
R009	1-240-993-91	METAL CHIP	10K 5% 1/10W
R011	1-240-993-91	METAL CHIP	10K 5% 1/10W
R012	1-240-993-91	METAL CHIP	10K 5% 1/10W
R013	1-240-969-91	METAL CHIP	100 5% 1/10W
R014	1-240-969-91	METAL CHIP	100 5% 1/10W

A D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK	
R017	1-240-969-91	METAL CHIP	100	5%	1/10W	
R018	1-240-969-91	METAL CHIP	100	5%	1/10W	
R020	1-240-969-91	METAL CHIP	100	5%	1/10W	
R021	1-240-969-91	METAL CHIP	100	5%	1/10W	
R022	1-240-973-91	METAL CHIP	220	5%	1/10W	
R023	1-240-981-91	METAL CHIP	1K	5%	1/10W	
R024	1-240-989-91	METAL CHIP	4.7K	5%	1/10W	
R028	1-240-989-91	METAL CHIP	4.7K	5%	1/10W	
R029	1-242-769-91	METAL CHIP	120K	5%	1/10W	
R030	1-240-969-91	METAL CHIP	100	5%	1/10W	
R031	1-240-981-91	METAL CHIP	1K	5%	1/10W	
R035	1-216-295-91	SHORT				
R041	1-240-969-91	METAL CHIP	100	5%	1/10W	
R045	1-240-985-91	METAL CHIP	2.2K	5%	1/10W	
R046	1-242-768-91	METAL CHIP	100K	5%	1/10W	
R047	1-240-993-91	METAL CHIP	10K	5%	1/10W	
R048	1-219-398-51	METAL	2.2M	5%	1W	
R049	1-216-697-91	METAL CHIP	82K	0.50%	1/10W	
R051	1-240-981-91	METAL CHIP	1K	5%	1/10W	
R052	1-240-993-91	METAL CHIP	10K	5%	1/10W	
R053	1-219-621-91	METAL	22M	10%	1/4W	
R062	1-216-295-91	SHORT				
R064	1-202-830-00	SOLID	10K	20%	1/2W	
R102	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R104	1-240-965-91	METAL CHIP	47	5%	1/10W	
R106	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R107	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R108	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R109	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R111	1-249-405-11	CARBON	100	5%	1/4W	F
R117	1-216-295-91	SHORT				
R118	1-216-295-91	SHORT				
R119	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R130	1-216-022-00	RES,CHIP	75	5%	1/10W	
R151	1-202-549-00	SOLID	100	20%	1/2W	
R161	1-215-394-00	METAL	75	1%	1/4W	
R202	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R204	1-240-965-91	METAL CHIP	47	5%	1/10W	
R206	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R207	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R208	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R209	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R211	1-249-405-11	CARBON	100	5%	1/4W	F
R217	1-216-295-91	SHORT				
R218	1-240-965-91	METAL CHIP	47	5%	1/10W	
R219	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R230	1-240-962-91	METAL CHIP	27	5%	1/10W	
R251	1-202-549-00	SOLID	100	20%	1/2W	
R261	1-215-394-00	METAL	75	1%	1/4W	
R302	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R304	1-240-965-91	METAL CHIP	47	5%	1/10W	
R306	1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R307	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R308	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R309	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R311	1-249-404-00	CARBON	82	5%	1/4W	F
R317	1-216-295-91	SHORT				
R318	1-216-295-91	SHORT				
R319	1-242-776-91	METAL CHIP	470K	5%	1/10W	
R330	1-216-022-00	RES,CHIP	75	5%	1/10W	
R351	1-202-549-00	SOLID	100	20%	1/2W	
R361	1-215-394-00	METAL	75	1%	1/4W	

SPARK GAP

SG001 ⚠	1-519-422-11	GAP, SPARK	
SG002 ⚠	1-517-499-21	GAP, SPARK	
SG101 ⚠	1-517-499-21	GAP, SPARK	
SG201 ⚠	1-517-499-21	GAP, SPARK	
SG301 ⚠	1-517-499-21	GAP, SPARK	

D

* **A-1346-865-A D COMPLETE PC BOARD**

	1-533-223-11	CLIP, FUSE
	3-703-319-01	PURSE LOCK (DIA.15)
	4-382-854-01	SCREW (M3X8), P, SW (+)
	4-382-854-21	SCREW (M3X14), P, SW (+)

CAPACITOR

C401	1-128-528-11	ELECT	470µF	20%	25V
C402	1-117-667-31	FILM	0.47µF	5%	250V
C403	1-107-911-11	ELECT	220µF	20%	50V
C404	1-128-528-11	ELECT	470µF	20%	25V
C405	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C406	1-137-368-11	MYLAR	0.0047µF	5%	50V
C407	1-137-372-11	MYLAR	0.022µF	5%	50V
C410	1-164-005-11	CERAMIC CHIP	0.47µF		25V
C501	1-126-964-11	ELECT	10µF	20%	50V
C502	1-137-370-11	MYLAR	0.01µF	5%	50V
C503	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C504	1-102-030-00	CERAMIC	330PF	10%	500V
C505	1-109-878-11	CERAMIC	15PF	5%	2KV
C506	1-126-960-11	ELECT	1µF	20%	50V
C507	1-131-653-11	FILM	0.19µF	5%	400V
C508	1-128-526-11	ELECT	100µF	20%	25V
C509	1-162-117-00	CERAMIC	100PF	10%	500V

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION	REMARK		
C510		1-102-228-00	CERAMIC	470PF	10%	500V
C511		1-117-663-11	FILM	0.22µF	5%	250V
C512		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C513		1-107-906-11	ELECT	10µF	20%	50V
C514		1-115-521-11	FILM	0.82µF	5%	250V
C515		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C516		1-119-862-11	FILM	0.3µF	5%	250V
C517		1-137-370-11	MYLAR	0.01µF	5%	50V
C518		1-117-954-11	FILM	4300PF	3%	1.8KV
C519		1-117-621-11	FILM	1200PF	3%	1.2KV
C520		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C521		1-107-444-11	CERAMIC	100PF	5%	2KV
C522		1-136-684-51	MYLAR	0.0022µF	10%	100V
C523		1-117-660-21	FILM	0.12µF	5%	250V
C524		1-110-641-51	ELECT	33µF	20%	200V
C525		1-136-060-00	FILM	0.047µF	5%	400V
C526		1-164-646-11	CERAMIC	2200PF	10%	500V
C527		1-117-879-91	MYLAR	0.01µF	10%	250V
C528		1-115-349-51	CERAMIC	0.01µF		2KV
C529		1-136-060-00	FILM	0.047µF	5%	400V
C530		1-117-660-21	FILM	0.12µF	5%	250V
C531		1-119-858-11	FILM	0.068µF	5%	250V
C532	⚠	1-137-401-11	MYLAR	0.22µF	10%	100V
C534	⚠	1-137-419-11	MYLAR	0.033µF	10%	100V
C535		1-130-495-00	MYLAR	0.1µF	5%	50V
C536		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C538		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C539	⚠	1-137-150-11	MYLAR	0.01µF	10%	100V
C540	⚠	1-136-203-11	FILM	10000PF	5%	630V
C541		1-126-963-11	ELECT	4.7µF	20%	50V
C542	⚠	1-126-964-11	ELECT	10µF	20%	50V
C543		1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C544	⚠	1-137-370-11	MYLAR	0.01µF	5%	50V
C545		1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C546		1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C547		1-107-902-11	ELECT	1µF	20%	50V
C548		1-130-471-00	MYLAR	0.001µF	5%	50V
C549		1-137-375-11	MYLAR	0.068µF	5%	50V
C550		1-126-933-11	ELECT	100µF	20%	16V
C551		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C552		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C553	⚠	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C554	⚠	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C555	⚠	1-130-495-00	MYLAR	0.1µF	5%	50V
C556	⚠	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C557		1-107-907-11	ELECT	22µF	20%	50V
C558	⚠	1-126-960-11	ELECT	1µF	20%	50V
C559		1-137-368-11	MYLAR	0.0047µF	5%	50V
C560		1-119-859-71	FILM	0.36µF	5%	250V

REF.NO.		PART NO.	DESCRIPTION	REMARK		
C561	⚠	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C562		1-128-526-11	ELECT	100µF	20%	16V
C563		1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C564		1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C566		1-128-551-11	ELECT	22µF	20%	25V
C568		1-136-060-00	FILM	0.047µF	5%	400V
C569		1-130-495-00	MYLAR	0.1µF	5%	50V
C570		1-128-526-11	ELECT	100µF	20%	25V
C572		1-107-651-11	ELECT	4.7µF	20%	250V
C573		1-107-651-11	ELECT	4.7µF	20%	250V
C574		1-117-879-91	MYLAR	0.01µF	10%	250V
C575		1-110-641-51	ELECT	33µF	20%	200V
C576		1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C577		1-115-349-51	CERAMIC	0.01µF		2KV
C578		1-107-974-11	CERAMIC	47PF	5%	2KV
C579		1-109-879-11	CERAMIC	22PF	5%	2KV
C580		1-137-370-11	MYLAR	0.01µF	5%	50V
C582		1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C583		1-130-495-00	MYLAR	0.1µF	5%	50V
C601		1-104-664-11	ELECT	47µF	20%	10V
C602		1-162-117-00	CERAMIC	100PF	10%	500V
C603		1-126-942-61	ELECT	1000µF	20%	25V
C604	⚠	1-104-708-11	MYLAR	0.47µF	20%	250V
C605	⚠	1-104-708-11	MYLAR	0.47µF	20%	250V
C608		1-104-653-11	ELECT	220µF	20%	16V
C610		1-107-852-11	ELECT(BLOCK)	330µF	20%	400V
C611		1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C612	⚠	1-119-858-11	FILM	0.068µF	5%	250V
C613	⚠	1-162-115-00	CERAMIC	330PF	10%	2KV
C614		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C615		1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
C616		1-107-907-11	ELECT	22µF	20%	25V
C617		1-107-907-11	ELECT	22µF	20%	25V
C618		1-130-495-00	MYLAR	0.1µF	5%	50V
C619		1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
C620		1-162-117-00	CERAMIC	100PF	10%	500V
C621		1-104-712-11	ELECT	47µF	0	200V
C622		1-107-933-11	ELECT	100µF	20%	100V
C623		1-104-666-11	ELECT	220µF	20%	25V
C624		1-107-885-11	ELECT	3300µF	20%	16V
C625		1-126-768-11	ELECT	2200µF	20%	16V
C626		1-104-653-11	ELECT	220µF	20%	16V
C627		1-126-934-11	ELECT	220µF	20%	10V
C628		1-128-526-11	ELECT	100µF	20%	25V
C630		1-126-935-11	ELECT	470µF	20%	16V
C631		1-126-935-11	ELECT	470µF	20%	16V
C632		1-128-954-21	ELECT	1000µF	20%	25V
C633		1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C634		1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION	REMARK		
C636		1-113-979-51	MYLAR	0.047µF	10%	1.5KV
C637		1-107-888-11	ELECT	47µF	20%	25V
C640		1-113-912-11	CERAMIC	0.0047µF	20%	250V
C641		1-126-933-11	ELECT	100µF	20%	16V
C643		1-113-912-11	CERAMIC	0.0047µF	20%	250V
C647		1-102-228-00	CERAMIC	470PF	10%	500V
C650		1-163-019-00	CERAMIC CHIP	0.0068µF	10%	50V
C660	⚠	1-113-912-11	CERAMIC	0.0047µF	20%	250V
C661		1-117-699-11	CERAMIC	0.001µF	20%	250V
C701		1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C702		1-126-963-11	ELECT	4.7µF	20%	50V
C703		1-136-169-00	MYLAR	0.22µF	5%	50V
C704		1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C705		1-130-495-00	MYLAR	0.1µF	5%	50V
C706		1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C707		1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C708		1-130-495-00	MYLAR	0.1µF	5%	50V
C709		1-126-941-11	ELECT	470µF	20%	25V
C710		1-126-941-11	ELECT	470µF	20%	25V
C711		1-130-495-00	MYLAR	0.1µF	5%	50V
C712		1-130-495-00	MYLAR	0.1µF	5%	50V
C713		1-126-927-11	ELECT	2200µF	20%	10V
C714		1-163-131-00	CERAMIC CHIP	390PF	5%	50V
C715		1-126-935-11	ELECT	470µF	20%	16V
C716		1-163-989-11	CERAMIC CHIP	0.033µF	10%	25V
C718		1-163-989-11	CERAMIC CHIP	0.033µF	10%	25V
C723		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C725		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C729		1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C733		1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C901		1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C902		1-126-935-11	ELECT	470µF	20%	16V
C903		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C905		1-137-375-11	MYLAR	0.068µF	5%	50V
C906		1-136-177-00	MYLAR	1µF	5%	50V
C908		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C909		1-126-926-11	ELECT	1000µF	20%	10V
C910		1-107-713-11	ELECT	4.7µF	20%	50V
C911		1-137-370-11	MYLAR	0.01µF	5%	50V
C912		1-126-933-11	ELECT	100µF	20%	16V
C913		1-130-495-00	MYLAR	0.1µF	5%	50V
C914		1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C915		1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C916		1-126-965-11	ELECT	22µF	20%	50V
C917		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C918		1-126-964-11	ELECT	10µF	20%	50V
C920		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C921		1-126-935-11	ELECT	470µF	20%	16V
C922		1-107-712-11	ELECT	3.3µF	20%	50V

REF.NO.		PART NO.	DESCRIPTION	REMARK		
C923		1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C924		1-126-965-11	ELECT	22µF	20%	50V
C925		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C926		1-126-935-11	ELECT	470µF	20%	16V
C927		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C928		1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C929		1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
C930		1-137-370-11	MYLAR	0.01µF	5%	50V
C931		1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C935		1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C936		1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C937		1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
C938		1-126-934-11	ELECT	220µF	20%	16V

CONNECTOR

CN501	*	1-580-798-11	CONNECTOR PIN (DY) 6P
CN502	*	1-564-512-11	PLUG, CONNECTOR 9P
CN512		1-695-915-11	TAB (CONTACT)
CN513		1-695-915-11	TAB (CONTACT)
CN600	⚠	1-251-644-11	INLET, AC 3P (WITH NOISE FILTER)
CN601	*	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P
CN602	*	1-506-371-00	PIN, CONNECTOR 2P
CN604		1-695-915-11	TAB (CONTACT)
CN701	*	1-564-513-11	PLUG, CONNECTOR 10P
CN901	*	1-508-879-11	BASE POST
CN902	*	1-564-513-11	PLUG, CONNECTOR 10P
CN903	*	1-564-511-11	PLUG, CONNECTOR 8P
CN904	*	1-564-510-11	PLUG, CONNECTOR 7P

DIODE

D401	8-719-052-90	DIODE D1NL40-TA2
D402	8-719-921-40	DIODE MTZJ-4.7C
D403	8-719-988-61	DIODE 1SS355TE-17
D404	8-719-058-24	DIODE RB501V-40TE-17
D501	8-719-110-31	DIODE RD12ESB2
D502	8-719-981-00	DIODE ERC81-004
D504	8-719-110-49	DIODE RD18ESB2
D505	8-719-941-74	DIODE ERB91-02
D506	8-719-075-18	DIODE FMQ-G2FS
D507	8-719-109-85	DIODE RD5.1ESB2
D509	8-719-110-17	DIODE RD10ESB2
D510	8-719-018-82	DIODE RGP02-20EL-6394
D511	8-719-109-89	DIODE RD5.6ESB2
D512	8-719-109-90	DIODE 1SS119-25
D513	8-719-109-91	DIODE D1NL40-TA2
D514	8-719-109-92	DIODE HSS82
D515 ⚠	8-719-109-93	DIODE RGP02-20EL-6394
D516	8-719-109-94	DIODE D2L40-TA

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION	REMARK
D517	⚠	8-719-109-95	DIODE HZT33-02TE	
D518		8-719-109-96	DIODE RD10ESB2	
D519		8-719-109-97	DIODE 1SS119-25	
D520		8-719-109-98	DIODE RGP02-20EL-6394	
D521		8-719-109-99	DIODE RGP02-20EL-6394	
D522		8-719-109-100	DIODE 1SS119-25	
D523		8-719-109-101	DIODE 1SS119-25	
D524		8-719-109-102	DIODE HSS83TD	
D525		8-719-109-103	DIODE HSS83TD	
D527		8-719-109-104	DIODE RD5.1ESB2	
D529		8-719-109-105	DIODE RD18ESB2	
D601	⚠	8-719-109-106	DIODE D4SB60L	
D602	⚠	8-719-109-107	DIODE 1SS119-25	
D603		8-719-109-108	DIODE 1SS119-25	
D604		8-719-109-109	DIODE 1SS119-25	
D605		8-719-109-110	DIODE RD12ESB2	
D606	⚠	8-719-109-111	DIODE UF4007G23	
D607		8-719-109-112	DIODE UF4007G23	
D608		8-719-109-113	DIODE RD18ESB2	
D609	⚠	8-719-109-114	DIODE 1SS119-25	
D610		8-719-109-115	DIODE MTZJ-4.7C	
D611		8-719-109-116	DIODE FMC-26UA	
D612		8-719-109-117	DIODE UF4007G23	
D613		8-719-109-118	DIODE BT149G-412-OT359	
D614		8-719-109-119	DIODE D1NS6	
D615		8-719-109-120	DIODE EGP10D	
D616		8-719-109-121	DIODE EGP10D	
D617		8-719-109-122	DIODE RGP10JPKG23	
D618		8-719-109-123	DIODE FMN-G12S	
D619		8-719-109-124	DIODE FMN-G12S	
D620		8-719-109-125	DIODE RH-1A	
D621		8-719-109-126	DIODE 1SS119-25	
D622		8-719-109-127	DIODE FMN-G12S	
D704		8-719-109-128	DIODE 1SS119-25	
D901		8-719-109-129	DIODE 1SS355TE-17	
D902		8-719-109-130	DIODE HZU5.6B2TRF	
D903		8-719-109-131	DIODE RB441Q-40T-77	
D904		8-719-109-132	DIODE HZU5.6B2TRF	
D905		8-719-109-133	DIODE 1SS119-25	
D906		8-719-109-134	DIODE 1SS355TE-17	
D907		8-719-109-135	DIODE 1SS355TE-17	
D908		8-719-109-136	DIODE 1SS355TE-17	
D909		8-719-109-137	DIODE HZU5.6B2TRF	
D910		8-719-109-138	DIODE HZU5.6B2TRF	
D911		8-719-109-139	DIODE 1SS355TE-17	
D913		8-719-109-140	DIODE 1SS355TE-17	
D914		8-719-109-141	DIODE 1SS355TE-17	
D915		8-719-109-142	DIODE 1SS355TE-17	
D916		8-719-109-143	DIODE 1SS355TE-17	

REF.NO.		PART NO.	DESCRIPTION	REMARK
D917		8-719-109-144	DIODE 1SS355TE-17	
D918		8-719-109-145	DIODE HZU5.6B2TRF	
D919		8-719-109-146	DIODE 1SS355TE-17	
D920		8-719-109-147	DIODE RB501V-40TE-17	
D921		8-719-109-148	DIODE 1SS355TE-17	
D924		8-719-109-149	DIODE 1SS355TE-17	
D925		8-719-109-150	DIODE 1SS355TE-17	
D926		8-719-109-151	DIODE 1SS355TE-17	
D927		8-719-109-152	DIODE 1SS355TE-17	
D928		8-719-109-153	DIODE HZU5.6B2TRF	
D929		8-719-109-154	DIODE HZU5.6B2TRF	
D930		8-719-109-155	DIODE HZU5.6B2TRF	
D931		8-719-109-156	DIODE RD5.6ESB2	
D932		8-719-109-157	DIODE RD5.6ESB2	
D933		8-719-109-158	DIODE RD5.6ESB2	
D934		8-719-109-159	DIODE HZU5.6B2TRF	
D935		8-719-109-160	DIODE RD5.1ESB2	
D936		8-719-109-161	DIODE RD5.6ESB2	
D937		8-719-109-162	DIODE RD5.6ESB2	

FUSE

F601	⚠	1-576-231-11	FUSE (H.B.C.) 4A/250V	

FERRITE BEAD

FB502	1-410-396-41	FERRITE	0µH
FB504	1-412-911-11	FERRITE	0µH
FB506	1-412-911-11	FERRITE	0µH
FB904	1-543-961-22	FERRITE	0µH

IC

IC401		8-759-339-59	IC TDA8177	
IC501	⚠	8-759-570-29	IC UPC6757CS	
IC502		8-759-803-42	IC LA6500-FA	
IC503		8-759-803-42	IC LA6500-FA	
IC601	⚠	8-759-594-75	IC TEA1504/N2	
IC602		8-759-592-79	IC BA00AST-V5	
IC603	⚠	8-749-016-35	IC TLP621D4-Y-LF2T	
IC604		8-759-586-17	IC TL1431CZ-AP	
IC605		8-759-637-83	IC PQ12RD8S	
IC607	⚠	8-759-450-47	IC BA05T	
IC608		8-759-231-53	IC L7805CV	
IC701		8-759-595-52	IC CXA8070AP	
IC702		8-749-015-00	IC STK391-110	
IC703		8-759-822-38	IC LA6510	
IC901	⚠	8-759-596-69	IC CXD9528S	
IC902		8-759-594-40	IC CXA8071CP	
IC904		8-759-352-91	IC PST9143NL	

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC905	8-759-527-76	IC M24C08-MN6T	

CHIP CONDUCTOR

JR001	1-216-296-91	SHORT	
JR003	1-216-295-91	SHORT	
JR004	1-216-295-91	SHORT	
JR006	1-216-295-91	SHORT	
JR007	1-216-295-91	SHORT	
JR008	1-216-296-91	SHORT	
JR009	1-216-295-91	SHORT	
JR010	1-216-296-91	SHORT	
JR011	1-216-296-91	SHORT	
JR012	1-216-295-91	SHORT	
JR013	1-216-295-91	SHORT	
JR014	1-216-296-91	SHORT	
JR015	1-216-295-91	SHORT	
JR016	1-216-295-91	SHORT	
JR017	1-216-295-91	SHORT	
JR018	1-216-295-91	SHORT	
JR019	1-216-296-91	SHORT	
JR020	1-216-296-91	SHORT	
JR021	1-216-296-91	SHORT	
JR022	1-216-295-91	SHORT	
JR023	1-216-295-91	SHORT	
JR024	1-216-296-91	SHORT	
JR025	1-216-296-91	SHORT	
JR027	1-216-296-91	SHORT	
JR028	1-216-296-91	SHORT	
JR029	1-216-295-91	SHORT	
JR030	1-216-295-91	SHORT	
JR032	1-216-296-91	SHORT	
JR033	1-216-296-91	SHORT	
JR034	1-216-295-91	SHORT	
JR038	1-216-296-91	SHORT	
JR604	1-216-295-91	SHORT	
JR606	1-216-295-91	SHORT	

COIL

L501	1-406-663-21	INDUCTOR	47µH
L502	1-406-663-21	INDUCTOR	47µH
L503	1-411-594-41	INDUCTOR	5mH
L505	1-412-552-11	INDUCTOR	2.2mH
L506	1-412-548-31	INDUCTOR	820µH
L507	1-414-856-11	INDUCTOR	10µH
L508	1-419-198-21	COIL, HORIZONTAL LINEARITY	
L509	1-419-198-21	COIL, HORIZONTAL LINEARITY	
L510	1-416-367-11	COIL, HORIZONTAL CENTER	
L511	1-414-187-11	INDUCTOR	47µH
L513	1-414-856-11	INDUCTOR	10µH
L602	1-412-529-11	INDUCTOR	22µH
L603	1-412-537-31	INDUCTOR	100µH
L604	1-406-665-11	INDUCTOR	100µH
L606	1-406-665-11	INDUCTOR	100µH

FILTER

LF602 ⚠	1-429-180-11	TRANSFORMER, LINE FILTER	

TRANSISTOR

Q501	8-729-120-28	TRANSISTOR 2SC1623-L5L6
Q502	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q503	8-729-035-54	TRANSISTOR 2SJ449
Q504	8-729-031-89	TRANSISTOR 2SC3941A-Q(TA)
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q506	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q507	8-729-049-17	TRANSISTOR 2SC5302-SONY-CC
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q510	8-729-046-60	TRANSISTOR 2SK2605LBSONY
Q511	8-729-042-34	TRANSISTOR IRFU110A
Q512	8-729-047-72	TRANSISTOR 2SK3155-01
Q513	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119
Q514	8-729-047-72	TRANSISTOR 2SK3155-01
Q515	8-729-047-72	TRANSISTOR 2SK3155-01
Q516	8-729-047-72	TRANSISTOR 2SK3155-01
Q518	8-729-140-50	TRANSISTOR 2SC3209LK
Q519	8-729-029-68	TRANSISTOR DTC114TSA
Q520	8-729-035-54	TRANSISTOR 2SJ449
Q521	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q522	8-729-027-23	TRANSISTOR DTA114EKA-T146
Q524	8-729-026-49	TRANSISTOR 2SA1037AK-T146-R
Q525	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q601	8-729-029-92	TRANSISTOR DTC143ESA
Q602 ⚠	8-729-048-61	TRANSISTOR 2SK2843LBS2SONY
Q603	8-729-900-53	TRANSISTOR DTC114EK
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q605	8-729-900-53	TRANSISTOR DTC114EK
Q903	8-729-120-28	TRANSISTOR 2SC1623-L5L6

RESISTOR

R401	1-249-381-11	CARBON	1	5%	1/4W	F
R402	1-215-866-11	METAL OXIDE	330	5%	1W	F
R403	1-214-661-21	METAL	1.5	1%	1/4W	
R404	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R405	1-214-661-21	METAL	1.5	1%	1/4W	
R406	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R407	1-240-985-91	METAL CHIP	2.2K	5%	1/10W	

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION				
R408		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R409		1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R410		1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R500		1-249-377-11	CARBON	0.47	5%	1/4W	F
R501		1-240-969-91	METAL CHIP	100	5%	1/10W	
R502		1-218-758-11	METAL CHIP	180K	0.50%	1/10W	
R503		1-216-675-91	METAL CHIP	10K	0.50%	1/10W	
R504		1-249-377-11	CARBON	0.47	5%	1/4W	F
R505		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R506		1-215-481-00	METAL	330K	1%	1/4W	
R507		1-215-431-00	METAL	2.7K	1%	1/4W	
R508		1-247-807-31	CARBON	100	5%	1/4W	
R509		1-247-863-91	CARBON	22K	5%	1/4W	
R510	⚠	1-215-437-00	METAL	4.7K	1%	1/4W	
R511		1-249-381-11	CARBON	1	5%	1/4W	F
R512		1-249-389-11	CARBON	4.7	5%	1/4W	
R513		1-215-888-00	METAL OXIDE	220	5%	2W	F
R514		1-240-997-91	METAL CHIP	22K	5%	1/10W	
R515		1-249-417-11	CARBON	1K	5%	1/4W	F
R516		1-214-844-81	METAL	150	1%	1/2W	
R517		1-216-393-00	METAL OXIDE	2.2	5%	3W	F
R518		1-216-393-00	METAL OXIDE	2.2	5%	3W	F
R519		1-215-463-00	METAL	56K	1%	1/4W	
R520		1-249-397-11	CARBON	22	5%	1/4W	F
R521		1-249-417-11	CARBON	1K	5%	1/4W	F
R522		1-249-401-11	CARBON	47	5%	1/4W	
R523		1-215-463-00	METAL	56K	1%	1/4W	
R524		1-215-463-00	METAL	56K	1%	1/4W	
R525		1-249-417-11	CARBON	1K	5%	1/4W	F
R527		1-249-429-11	CARBON	10K	5%	1/4W	
R528		1-240-997-91	METAL CHIP	22K	5%	1/10W	
R529		1-249-429-11	CARBON	10K	5%	1/4W	F
R530		1-216-474-11	METAL OXIDE	82	5%	3W	F
R531		1-216-474-11	METAL OXIDE	82	5%	3W	F
R532		1-249-385-11	CARBON	2.2	5%	1/4W	F
R533		1-249-417-11	CARBON	1K	5%	1/4W	F
R534		1-249-405-11	CARBON	100	5%	1/4W	F
R535		1-215-463-00	METAL	56K	1%	1/4W	
R536		1-249-417-11	CARBON	1K	5%	1/4W	F
R537		1-215-463-00	METAL	56K	1%	1/4W	
R538		1-215-905-11	METAL OXIDE	10	5%	3W	F
R539		1-215-905-11	METAL OXIDE	10	5%	3W	F
R540	⚠	1-215-476-00	METAL	200K	1%	1/4W	
R541	⚠	1-215-421-00	METAL	1K	1%	1/4W	
R542	⚠	1-215-421-00	METAL	1K	1%	1/4W	
R543	⚠	1-249-389-11	CARBON	4.7	5%	1/4W	F
R544	⚠	1-247-903-00	CARBON	1M	5%	1/4W	
R545		1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R546		1-215-457-00	METAL	33K	1%	1/4W	
R547	⚠	1-215-477-00	METAL	220K	1%	1/4W	
R548		1-215-423-00	METAL	1.2K	1%	1/4W	
R549	⚠	1-215-464-00	METAL	62K	1%	1/4W	
R550		1-215-423-00	METAL	1.2K	1%	1/4W	
R551		1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R552	⚠	1-215-463-00	METAL	56K	1%	1/4W	
R553		1-216-698-11	METAL CHIP	91K	0.50%	1/10W	
R554		1-218-756-11	METAL CHIP	150K	0.50%	1/10W	
R556		1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R557		1-240-996-91	METAL CHIP	18K	5%	1/10W	
R558		1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R559		1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R560		1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R561		1-216-474-11	METAL OXIDE	82	5%	3W	F
R562		1-215-451-00	METAL	18K	1%	1/4W	
R563		1-249-383-11	CARBON	1.5	5%	1/4W	F
R564	⚠	1-242-764-91	METAL CHIP	47K	5%	1/10W	
R565		1-215-481-00	METAL	330K	1%	1/4W	
R566		1-215-859-00	METAL OXIDE	22	5%	1W	F
R567	⚠	1-240-993-91	METAL CHIP	10K	5%	1/10W	
R568	⚠	1-249-437-11	CARBON	47K	5%	1/4W	
R569		1-216-643-11	METAL CHIP	470	0.50%	1/10W	
R570		1-247-831-91	CARBON	1K	5%	1/4W	
R571		1-215-926-00	METAL OXIDE	33K	5%	3W	F
R572		1-249-437-11	CARBON	47K	5%	1/4W	
R573		1-247-887-00	CARBON	220K	5%	1/4W	
R574		1-249-421-11	CARBON	2.2K	5%	1/4W	
R575		1-260-314-11	CARBON	68	5%	1/2W	
R576		1-249-437-11	CARBON	47K	5%	1/4W	
R577		1-215-908-00	METAL OXIDE	33	5%	3W	F
R578		1-216-448-11	METAL OXIDE	39	5%	2W	F
R579		1-247-883-00	CARBON	150K	5%	1/4W	
R580		1-240-995-91	METAL CHIP	15K	5%	1/10W	
R581		1-249-429-11	CARBON	10K	5%	1/4W	
R582		1-249-402-11	CARBON	56	5%	1/4W	F
R583		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R584		1-240-989-91	METAL CHIP	4.7K	5%	1/10W	
R585		1-247-831-91	CARBON	1K	5%	1/4W	
R586		1-249-421-11	CARBON	2.2K	5%	1/4W	
R587		1-247-831-91	CARBON	1K	5%	1/4W	
R589		1-249-425-11	CARBON	4.7K	5%	1/4W	
R590		1-215-453-00	METAL	22K	1%	1/4W	
R591		1-214-844-81	METAL	150	1%	1/2W	
R592		1-214-844-81	METAL	150	1%	1/2W	
R594		1-240-973-91	METAL CHIP	220	5%	1/10W	
R595	⚠	1-215-477-00	METAL	220K	1%	1/4W	
R596		1-215-423-00	METAL	1.2K	1%	1/4W	
R597		1-259-880-11	CARBON	2.2M	5%	1/4W	
R599		1-247-831-91	CARBON	1K	5%	1/4W	

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.		PART NO.	DESCRIPTION				
R600		1-205-998-11	CEMENTED	1	5%	10W	
R602		1-219-513-11	CARBON	4.7M	5%	1/2W	
R603		1-249-403-11	CARBON	68	5%	1/4W	
R604	⚠	1-220-827-91	REGISTER	560K	5%	1/2W	
R605		1-211-761-71	RES, FUSE	0.1	10%	1/2W	
R606		1-218-768-11	METAL CHIP	470K	0.50%	1/10W	
R607		1-240-997-91	METAL CHIP	22K	5%	1/10W	
R608		1-215-473-00	METAL	150K	1%	1/4W	
R609		1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R610		1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R611		1-240-961-91	METAL CHIP	22	5%	1/10W	
R612		1-247-791-91	CARBON	22	5%	1/4W	
R613	⚠	1-219-513-11	CARBON	4.7M	5%	1/2W	
R614		1-216-345-11	METAL OXIDE	0.47	5%	1W	F
R615		1-242-778-91	METAL CHIP	680K	5%	1/10W	
R616		1-242-780-91	METAL CHIP	1M	5%	1/10W	
R617		1-240-969-91	METAL CHIP	100	5%	1/10W	
R618		1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R619		1-215-893-11	METAL OXIDE	1.5K	5%	2W	F
R620		1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R621		1-216-098-00	RES,CHIP	110K	5%	1/10W	
R622		1-247-791-91	CARBON	22	5%	1/4W	
R623		1-216-615-91	METAL CHIP	33	0.50%	1/10W	
R624		1-216-611-11	METAL CHIP	22	0.50%	1/10W	
R625		1-260-332-51	CARBON	2.2K	5%	1/2W	
R626		1-240-985-91	METAL CHIP	2.2K	5%	1/10W	
R627		1-249-377-11	CARBON	0.47	5%	1/4W	F
R628		1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	
R629		1-249-441-11	CARBON	100K	5%	1/4W	
R630	⚠	1-211-874-71	RES, FUSE	0.12	10%	1/2W	
R631	⚠	1-211-874-71	RES, FUSE	0.12	10%	1/2W	
R633		1-249-429-11	CARBON	10K	5%	1/4W	
R634	⚠	1-211-874-71	RES, FUSE	0.12	10%	1/2W	
R635		1-215-925-11	METAL OXIDE	22K	5%	3W	F
R636		1-260-119-11	CARBON	47K	5%	1/2W	
R637		1-215-902-11	METAL OXIDE	47K	5%	2W	F
R638	⚠	1-211-874-71	RES, FUSE	0.12	10%	1/2W	
R639	⚠	1-211-874-71	RES, FUSE	0.12	10%	1/2W	
R640		1-249-381-11	CARBON	1	5%	1/4W	F
R642		1-216-641-11	METAL CHIP	390	0.50%	1/10W	
R643		1-215-467-00	METAL	82K	1%	1/4W	
R645		1-216-675-91	METAL CHIP	10K	0.50%	1/10W	
R646		1-242-763-91	METAL CHIP	39K	5%	1/10W	
R647		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R648		1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R649		1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R650		1-215-471-00	METAL	120K	1%	1/4W	
R654		1-216-344-00	METAL OXIDE	0.39	5%	1W	F
R655		1-247-807-31	CARBON	100	5%	1/4W	
R656		1-215-893-11	METAL OXIDE	1.5K	5%	2W	F
R660		1-260-119-11	CARBON	47K	5%	1/2W	
R661		1-215-902-11	METAL OXIDE	47K	5%	2W	F
R663		1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R665		1-216-663-11	METAL CHIP	3.3K	0.50%	1/10W	
R703		1-249-410-11	CARBON	270	5%	1/4W	
R704		1-216-673-11	METAL CHIP	8.2K	0.50%	1/10W	
R705		1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R706		1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R707		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R708		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R709		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R710		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R711		1-216-346-00	METAL OXIDE	0.56	5%	1W	F
R712		1-215-860-11	METAL OXIDE	33	5%	1W	F
R713		1-216-347-11	METAL OXIDE	0.68	5%	1W	F
R716		1-215-860-11	METAL OXIDE	33	5%	1W	F
R717		1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R718		1-215-863-11	METAL OXIDE	100	5%	1W	F
R719		1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R724		1-216-422-11	METAL OXIDE	18	5%	1W	F
R727		1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R728		1-215-863-11	METAL OXIDE	100	5%	1W	F
R729		1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R730		1-216-421-11	METAL OXIDE	12	5%	1W	F
R731		1-216-295-91	SHORT				
R733		1-216-295-91	SHORT				
R735		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R737		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W	
R739		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R741		1-249-377-11	CARBON	0.47	5%	1/4W	F
R743		1-249-377-11	CARBON	0.47	5%	1/4W	F
R745		1-240-949-91	METAL CHIP	2.2	5%	1/10W	
R747		1-240-949-91	METAL CHIP	2.2	5%	1/10W	
R753		1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R755		1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R903		1-240-981-91	METAL CHIP	1K	5%	1/10W	
R904		1-240-981-91	METAL CHIP	1K	5%	1/10W	
R905		1-216-295-91	SHORT	0			
R906		1-240-993-91	METAL CHIP	10K	5%	1/10W	
R907		1-260-087-81	CARBON	100	5%	1/2W	
R908		1-240-985-91	METAL CHIP	2.2K	5%	1/10W	
R909		1-240-985-91	METAL CHIP	2.2K	5%	1/10W	
R912		1-240-981-91	METAL CHIP	1K	5%	1/10W	
R913		1-240-969-91	METAL CHIP	100	5%	1/10W	
R914		1-240-969-91	METAL CHIP	100	5%	1/10W	
R915		1-240-989-91	METAL CHIP	4.7K	5%	1/10W	
R916		1-240-995-91	METAL CHIP	15K	5%	1/10W	
R917		1-240-995-91	METAL CHIP	15K	5%	1/10W	

D H

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding x-ray radiation. Should replacement be required, replace only with the value originally used.

REF.NO.		PART NO.	DESCRIPTION			
R918		1-240-981-91	METAL CHIP	1K	5%	1/10W
R919		1-240-969-91	METAL CHIP	100	5%	1/10W
R920		1-240-981-91	METAL CHIP	1K	5%	1/10W
R921		1-216-295-91	SHORT			
R922		1-240-993-91	METAL CHIP	10K	5%	1/10W
R923		1-216-295-91	SHORT			
R924		1-240-969-91	METAL CHIP	100	5%	1/10W
R925		1-242-776-91	METAL CHIP	470K	5%	1/10W
R926		1-240-969-91	METAL CHIP	100	5%	1/10W
R927		1-216-295-91	SHORT			
R928		1-240-969-91	METAL CHIP	100	5%	1/10W
R929		1-240-985-91	METAL CHIP	2.2K	5%	1/10W
R931		1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W
R932		1-240-995-91	METAL CHIP	15K	5%	1/10W
R933		1-247-831-91	CARBON	1K	5%	1/4W
R934		1-249-429-11	CARBON	10K	5%	1/4W
R935		1-240-969-91	METAL CHIP	100	5%	1/10W
R936		1-240-969-91	METAL CHIP	100	5%	1/10W
R937		1-240-969-91	METAL CHIP	100	5%	1/10W
R938		1-240-969-91	METAL CHIP	100	5%	1/10W
R940		1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W
R943		1-249-413-11	CARBON	470	5%	1/4W
R950		1-240-982-91	METAL CHIP	1.2K	5%	1/10W
R951		1-240-969-91	METAL CHIP	100	5%	1/10W
R953		1-240-993-91	METAL CHIP	10K	5%	1/10W
R954		1-240-993-91	METAL CHIP	10K	5%	1/10W
R957		1-240-965-91	METAL CHIP	47	5%	1/10W
R958		1-240-965-91	METAL CHIP	47	5%	1/10W

VARIABLE RESISTOR

⧓ RV501	⚠	1-241-767-21	RES, ADJ, CERMET	100K
		3-710-578-01	COVER, VOLUME, 6 MOLD	

RELAY

RY500		1-755-137-11	RELAY
RY601	⚠	1-755-067-21	RELAY

SWITCH

S602	⚠	1-771-757-11	SWITCH, PUSH (1 KEY)
S901		1-692-431-21	SWITCH, TACTILE

SPARK GAP

SG501		1-519-422-11	GAP, SPARK

REF.NO.		PART NO.	DESCRIPTION

TRANSFORMER

T501	⚠	1-453-311-11	FBT ASSY NX-4404//X4L4
T503		1-433-979-11	TRANSFORMER, FERRITE (DFT)
T504		1-433-978-11	TRANSFORMER, FERRITE
T505		1-431-413-11	TRANSFORMER, FERRITE (HST)
T601	⚠	1-433-847-14	TRANSFORMER, CONVERTER (SRT)

THERMISTOR

TH501		1-807-796-11	THERMISTOR
TH600	⚠	1-809-827-11	THERMISTOR, NTC
TH601		1-803-540-11	THERMISTOR

VARISTOR

VA601	⚠	1-801-073-31	VARISTOR TNR14V471K660

CRYSTAL

X901	1-767-641-11	VIBRATOR, CRYSTAL
X902	1-767-933-11	OSCILLATOR, CERAMIC

H

*	**A-1372-697-A**	**H MOUNTED PC BOARD**	

CAPACITOR

C801	1-104-664-11	ELECT	47µF	20%	10V

CONNECTOR

CN801	*	1-564-510-11	PLUG, CONNECTOR 7P

DIODE

D803	8-719-064-11	DIODE SPR-325MVW

TRANSISTOR

Q801	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q802	8-729-119-78	TRANSISTOR 2SC2785-HFE

RESISTOR

R801	1-215-417-00	METAL	680	1%	1/4W
R802	1-215-421-00	METAL	1K	1%	1/4W
R803	1-215-427-00	METAL	1.8K	1%	1/4W
R804	1-215-433-00	METAL	3.3K	1%	1/4W

H

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R805	1-247-807-31	CARBON	100	5%	1/4W
R806	1-247-807-31	CARBON	100	5%	1/4W
R807	1-249-411-11	CARBON	330	5%	1/4W
R808	1-249-413-11	CARBON	470	5%	1/4W

SWITCH

S801	1-771-734-11	SWITCH, TACTILE

REF.NO.	PART NO.	DESCRIPTION	REMARK

NOTES:

NOTES:

Sony Corporation
Sony Technology Center
Product Quality Division
Service Promotion Dept.

English
99IS74109-1
Printed in U.S.A.

9-978-869-01

Self Diagnosis Supported model

SERVICE MANUAL

CPD-E210

CPD-E210

US Model

Canadian Model

Chassis No. SCC-L31A-A

D99C CHASSIS

CORRECTION-1

SUBJECT: D Board Diode Part Number Listing Correction

Correct the service manual as shown.
File this Correction with the service manual.

TRINITRON® COLOR MONITOR

SONY®

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Section 7 Electrical Parts List (page 40-41)

Diode D511 through D937 are printed incorrectly in the original manual. Please use the following part numbers when ordering replacement diodes for these components:

REF.NO.	PART NO.	DESCRIPTION	REMARK
	DIODE		
D511	8-719-109-89	DIODE RD5.6ESB2	
D512	8-719-911-19	DIODE 1SS119-25	
D513	8-719-052-90	DIODE D1NL40-TA2	
D514	8-719-970-83	DIODE HSS82	
D515 ⚠	8-719-018-82	DIODE RGP02-20EL-6394	
D516	8-719-052-86	DIODE D2L40-TA	
D517 ⚠	8-759-157-40	IC UPC574J	
D518	8-719-110-17	DIODE RD10ESB2	
D519	8-719-911-19	DIODE 1SS119-25	
D520	8-719-018-82	DIODE RGP02-20EL-6394	
D521	8-719-018-82	DIODE RGP02-20EL-6394	
D522	8-719-911-19	DIODE 1SS119-25	
D523	8-719-911-19	DIODE 1SS119-25	
D524	8-719-051-85	DIODE HSS83TD	
D525	8-719-051-85	DIODE HSS83TD	
D527	8-719-109-85	DIODE RD5.1ESB2	
D529	8-719-110-49	DIODE RD18ESB2	
D601 ⚠	8-719-510-53	DIODE D4SB60L	
D602 ⚠	8-719-911-19	DIODE 1SS119-25	
D603	8-719-911-19	DIODE 1SS119-25	
D604	8-719-911-19	DIODE 1SS119-25	
D605	8-719-110-31	DIODE RD12ESB2	
D606 ⚠	8-719-053-19	DIODE µF4007G23	
D607	8-719-053-19	DIODE µF4007G23	
D608	8-719-110-49	DIODE RD18ESB2	
D609 ⚠	8-719-911-19	DIODE 1SS119-25	
D610	8-719-921-40	DIODE MTZJ-4.7C	
D611	8-719-067-68	DIODE FMC-26UA	
D612	8-719-053-19	DIODE µF4007G23	
D613	8-719-076-20	DIODE BT149G-412-OT359	
D614	8-719-032-12	DIODE D1NS6	
D615	8-719-979-58	DIODE EGP10D	
D616	8-719-979-58	DIODE EGP10D	
D617	8-719-947-06	DIODE RGP10JPKG23	
D618	8-719-058-38	DIODE FMN-G12S	
D619	8-719-058-38	DIODE FMN-G12S	
D620	8-719-300-76	DIODE RH-1A	
D621	8-719-911-19	DIODE 1SS119-25	
D622	8-719-058-38	DIODE FMN-G12S	
D704	8-719-911-19	DIODE 1SS119-25	
D901	8-719-988-61	DIODE 1SS355TE-17	
D902	8-719-047-98	DIODE HZU5.6B2TRF	
D903	8-719-050-84	DIODE RB441Q-40T-77	
D904	8-719-047-98	DIODE HZU5.6B2TRF	
D905	8-719-911-19	DIODE 1SS119-25	
D906	8-719-988-61	DIODE 1SS355TE-17	
D907	8-719-988-61	DIODE 1SS355TE-17	
D908	8-719-988-61	DIODE 1SS355TE-17	
D909	8-719-047-98	DIODE HZU5.6B2TRF	
D910	8-719-047-98	DIODE HZU5.6B2TRF	
D911	8-719-988-61	DIODE 1SS355TE-17	
D913	8-719-988-61	DIODE 1SS355TE-17	
D914	8-719-988-61	DIODE 1SS355TE-17	
D915	8-719-988-61	DIODE 1SS355TE-17	
D916	8-719-988-61	DIODE 1SS355TE-17	
D917	8-719-988-61	DIODE 1SS355TE-17	
D918	8-719-047-98	DIODE HZU5.6B2TRF	
D919	8-719-988-61	DIODE 1SS355TE-17	
D920	8-719-058-24	DIODE RB501V-40TE-17	
D921	8-719-988-61	DIODE 1SS355TE-17	
D924	8-719-988-61	DIODE 1SS355TE-17	
D925	8-719-988-61	DIODE 1SS355TE-17	
D926	8-719-988-61	DIODE 1SS355TE-17	
D927	8-719-988-61	DIODE 1SS355TE-17	
D928	8-719-047-98	DIODE HZU5.6B2TRF	
D929	8-719-047-98	DIODE HZU5.6B2TRF	
D930	8-719-047-98	DIODE HZU5.6B2TRF	
D931	8-719-109-89	DIODE RD5.6ESB2	
D932	8-719-109-89	DIODE RD5.6ESB2	
D933	8-719-109-89	DIODE RD5.6ESB2	
D934	8-719-047-98	DIODE HZU5.6B2TRF	
D935	8-719-109-85	DIODE RD5.1ESB2	
D936	8-719-109-89	DIODE RD5.6ESB2	
D937	8-719-109-89	DIODE RD5.6ESB2	

SONY CORPORATION
Sony Technology Center
Technical Services
Service Promotion Department

English
2000GJ74107-1
Printed in U.S.A.

9-978-869-91

Self Diagnosis Supported model

SERVICE MANUAL

CPD-E210

CPD-E210

US Model

Canadian Model

Chassis No. SCC-L31A-A

D99C CHASSIS

CORRECTION-1

SUBJECT: D Board Diode Part Number Listing Correction

Correct the service manual as shown.
File this Correction with the service manual.

TRINITRON® COLOR MONITOR

SONY®

D

Note:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Section 7 Electrical Parts List (page 40-41)

Diode D511 through D937 are printed incorrectly in the original manual. Please use the following part numbers when ordering replacement diodes for these components:

REF.NO.	PART NO.	DESCRIPTION	REMARK
	DIODE		
D511	8-719-109-89	DIODE RD5.6ESB2	
D512	8-719-911-19	DIODE 1SS119-25	
D513	8-719-052-90	DIODE D1NL40-TA2	
D514	8-719-970-83	DIODE HSS82	
D515 ⚠	8-719-018-82	DIODE RGP02-20EL-6394	
D516	8-719-052-86	DIODE D2L40-TA	
D517 ⚠	8-759-157-40	IC UPC574J	
D518	8-719-110-17	DIODE RD10ESB2	
D519	8-719-911-19	DIODE 1SS119-25	
D520	8-719-018-82	DIODE RGP02-20EL-6394	
D521	8-719-018-82	DIODE RGP02-20EL-6394	
D522	8-719-911-19	DIODE 1SS119-25	
D523	8-719-911-19	DIODE 1SS119-25	
D524	8-719-051-85	DIODE HSS83TD	
D525	8-719-051-85	DIODE HSS83TD	
D527	8-719-109-85	DIODE RD5.1ESB2	
D529	8-719-110-49	DIODE RD18ESB2	
D601 ⚠	8-719-510-53	DIODE D4SB60L	
D602 ⚠	8-719-911-19	DIODE 1SS119-25	
D603	8-719-911-19	DIODE 1SS119-25	
D604	8-719-911-19	DIODE 1SS119-25	
D605	8-719-110-31	DIODE RD12ESB2	
D606 ⚠	8-719-053-19	DIODE µF4007G23	
D607	8-719-053-19	DIODE µF4007G23	
D608	8-719-110-49	DIODE RD18ESB2	
D609 ⚠	8-719-911-19	DIODE 1SS119-25	
D610	8-719-921-40	DIODE MTZJ-4.7C	
D611	8-719-067-68	DIODE FMC-26UA	
D612	8-719-053-19	DIODE µF4007G23	
D613	8-719-076-20	DIODE BT149G-412-OT359	
D614	8-719-032-12	DIODE D1NS6	
D615	8-719-979-58	DIODE EGP10D	
D616	8-719-979-58	DIODE EGP10D	
D617	8-719-947-06	DIODE RGP10JPKG23	
D618	8-719-058-38	DIODE FMN-G12S	
D619	8-719-058-38	DIODE FMN-G12S	
D620	8-719-300-76	DIODE RH-1A	
D621	8-719-911-19	DIODE 1SS119-25	
D622	8-719-058-38	DIODE FMN-G12S	
D704	8-719-911-19	DIODE 1SS119-25	
D901	8-719-988-61	DIODE 1SS355TE-17	
D902	8-719-047-98	DIODE HZU5.6B2TRF	
D903	8-719-050-84	DIODE RB441Q-40T-77	
D904	8-719-047-98	DIODE HZU5.6B2TRF	
D905	8-719-911-19	DIODE 1SS119-25	
D906	8-719-988-61	DIODE 1SS355TE-17	
D907	8-719-988-61	DIODE 1SS355TE-17	
D908	8-719-988-61	DIODE 1SS355TE-17	
D909	8-719-047-98	DIODE HZU5.6B2TRF	
D910	8-719-047-98	DIODE HZU5.6B2TRF	
D911	8-719-988-61	DIODE 1SS355TE-17	
D913	8-719-988-61	DIODE 1SS355TE-17	
D914	8-719-988-61	DIODE 1SS355TE-17	
D915	8-719-988-61	DIODE 1SS355TE-17	
D916	8-719-988-61	DIODE 1SS355TE-17	
D917	8-719-988-61	DIODE 1SS355TE-17	
D918	8-719-047-98	DIODE HZU5.6B2TRF	
D919	8-719-988-61	DIODE 1SS355TE-17	
D920	8-719-058-24	DIODE RB501V-40TE-17	
D921	8-719-988-61	DIODE 1SS355TE-17	
D924	8-719-988-61	DIODE 1SS355TE-17	
D925	8-719-988-61	DIODE 1SS355TE-17	
D926	8-719-988-61	DIODE 1SS355TE-17	
D927	8-719-988-61	DIODE 1SS355TE-17	
D928	8-719-047-98	DIODE HZU5.6B2TRF	
D929	8-719-047-98	DIODE HZU5.6B2TRF	
D930	8-719-047-98	DIODE HZU5.6B2TRF	
D931	8-719-109-89	DIODE RD5.6ESB2	
D932	8-719-109-89	DIODE RD5.6ESB2	
D933	8-719-109-89	DIODE RD5.6ESB2	
D934	8-719-047-98	DIODE HZU5.6B2TRF	
D935	8-719-109-85	DIODE RD5.1ESB2	
D936	8-719-109-89	DIODE RD5.6ESB2	
D937	8-719-109-89	DIODE RD5.6ESB2	

SONY CORPORATION
Sony Technology Center
Technical Services
Service Promotion Department

9-978-869-91

English
00GJ74109-1
Printed in U.S.A.